Amateur Radio

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA
VOL 57, NO 4, APRIL 1989

Federal Convention:

Reports and Agenda Items

Ten-Metre Preamplifier

DICK SMITH COMMUNICATIONS

Yaesu's Amazing FT-4700RH

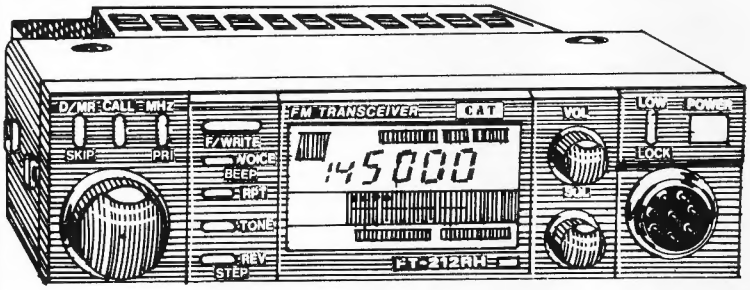
This is the 2m/70cm transceiver you've been waiting for! it boasts high power operation (50 watts on 2m, 40 watts on 70cm). With inbuilt cooling fan, detachable front panel for optional remote mounting of the transceiver body, true full-duplex operation (you can even listen to both bands sumultaneously!), 20 memories, 6 user selected tuning steps, the list goes on and on. Cat D-3300

2 YEAR WARRANTY

SUPER VALUE $1395

BONUS This month only, receive a YSK-4700 Remote Mounting Kit at NO CHARGE! Cat D-3301

Valued at $59.95



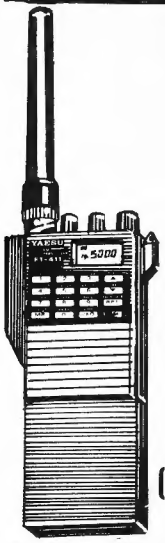
FT-212RH

A rugged yet compact 2 metre FM transceiver featuring 45 watts output for extended range, 20 memory channels coupled with a flexible "band" and "memory" scanning system, hand-held mic, optional DVS-1 digital voice recording module, and a 2 year extended warranty. Isn't this the reliable 2 metre mobile you've been looking for? Cat D-3494

$669

SAVE $30

35W 70cm also available. Cat D-3330 $649



FT-411

This ultra compact 2 metre hand-held offers an incredible array of features without the size and weight of previous sets. Compare! CPU control offers 49 freely tunable memories that store repeater offsets, 2 VFO's; huge 1000mAH capacity NiCad battery as standard (yes! 1 AH!) programmable power saver, fast keyboard frequency entry, heavy duty die-cast casing with rubber gasket seals, carry case, carry strap and charger. Cat D-3350

Complete Package

(Limited stocks) $549

FT-23R

Don't need the sophistication of the FT-411, but still want a reliable hand-held? The FT-23R offers 2.5 watts output, 10 memories, scanning, 600 mAH NiCad battery, diecast transceiver casing, carry case, charger and rubber gasket seals to keep out the dust and humidity that's hard to avoid while hand-held! Cat D-3490

Our best price ever! $439

DICK SMITH ELECTRONICS

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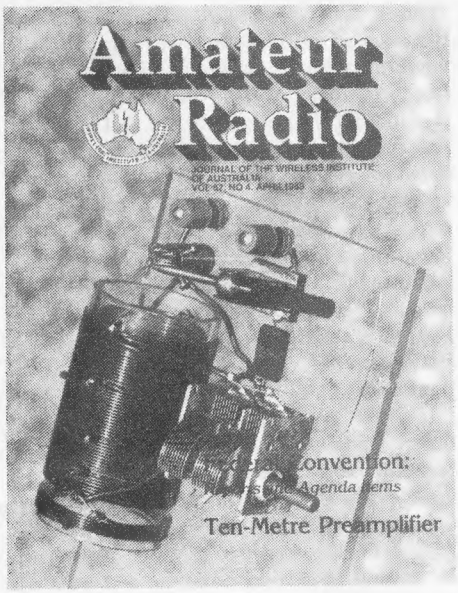
Amateur Radio



Cover

An updated crystal set which at one time had its performance enhanced by use of a tunnel diode. See story, page 14.

Deadlines for May

Editorial 12 April 1989

Hamads 18 April 1989

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It is impossible for us to ensure the advertisements submitted for publication comply with the Trade Practices Act 1974. Therefore advertisers and advertising agents will appreciate the absolute need for themselves to ensure that, the provisions of the Act are complied with **strictly.**

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Amateur Radio

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EDITOR
Bill Rice VK3ABP

NEWS EDITOR
Jim Linton VK3PC

TECHNICAL EDITING CO-ORDINATOR
Peter Gibson VK3AZL

TECHNICAL EDITORS
Evan Jarman VK3ANI
Gil Sones VK3AUI
David Brownsey VK4AFA
Don Graham VK6HK
Peter O'Connor VK4KIP
Phillip Steen VK4 APA

MARKETING
Bruce Kendall VK3WL

CONTRIBUTING EDITORS
Frank Beech VK7BC
Joy Collis VK2EBX
Brenda Edmonds VK3KT
Ron Fisher VK3OM
Norm Gomm VK1GN
Ken Gott VK3AJU
Gilbert Griffith VK3CQ
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Bill Horner VK4MWZ
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Tim Mills VK2ZTM
Hans Ruckert VK2AOU
John Sparkes VK6JX
Jennifer Warrington VK5ANW

DRAFTING
Vicki Griffin VK3BNK

Inquiries and material to the Editor: PO Box 300, Caulfield South, VIC 3162

Advertising: Ann McCurdy (03) 528 5962

Material should be sent direct to PO Box 300, Caulfield South, Vic. 3162, by the second Wednesday of the month preceding publication. Check page 1 for deadline dates. HAMADS should be sent direct to the same address, by the following Tuesday.

Acknowledgement may not be made unless specifically requested. All important items should be sent by Certified Mail. The editor reserves the right to edit all material, including Letters to the Editor and Hamads, and reserves the right to refuse acceptance of any material, without specifying a reason.

EDITOR'S COMMENT

To carry on from where we left off last month (ie at the helm of my trailer-sailer!) you will all be re-assured to know that our three-man radio amateur crew survived the 1989 Marlay Point race. In fact we had covered only about one-fifth of the course, tacking all night into the teeth of a Gippsland easterly, when we heard that the leaders were almost at the finish line, so persisting seemed pointless. We could not have finished before time ran out anyway. Whoever won the wooden spoon was miles in front of us, so we declared our boat, finally and irrevocably, to be far too slow for racing, and retired for the fifth time out of seven starts!

Judging by the rainfall reports as I write this (15th March) we may yet be able to repeat the performance of 1975-77, for which the boat is far more suitable, namely DXpedition cruising on Lake Eyre. Providing, of course, that someone else can take over the Editorial chair and let me get away to the flooded outback! So far, three people have expressed interest in the position, although for various reasons it may be that none is entirely suitable. Are there any further budding managing editors out there? It would seem to be virtually impossible, even with all the communication wizardry of 1989, to carry out the job by remote control, so it would seem to be essential that the Managing Editor should live in Melbourne.

At the last Federal Convention, it was decided that from 1989 on, before each Convention, all agenda items and co-ordinators' reports should be published in April AR, so that you, the members, would be better informed about WIA proceedings. Elsewhere in this issue you will find all such material received at the Executive Office to date.

Because of the extra information we have expanded this issue to 72 pages; and this has enabled us to include the 64 page catalogue from Emtronics which could not be fitted into earlier issues (see WIA News in Feb, p.4 for the full story). So that is the reason for this April 1989 issue being such a heavyweight monster!

With this issue we welcome two new regular contributors. At long last we have found a DX editor, willing and able to put together each month, from many sources, an up-to-date account of where the rare DX stations are and how to catch them. He is Pat Kelly, VK2RZ, and we introduce him on page 57.

Also, on page 45, we introduce a new column, primarily for the packeteers, but somewhat wider in its scope, as indicated by the title of "Data and Digital Modes". This is being provided by Brian Beamish, VK4AHD.

Over the next few months we have plans for several other new columns, and work has already commenced on a column devoted to the very widely popular theme of "Antennas". It should be a winner with most amateurs.

Finally, as many of you will have realised, our last issue (March) suffered from a number of problems. Most of the photos were too dark, while most of the diagrams were too small or not dark enough! Space was used somewhat unevenly, and several "typos" found their way through, even after the third proof-reading! Please bear with us; under our new production procedures we are still "feeling our way"! Hopefully, this issue will be better.

73
Bill Rice VK3ABP
Editor

Magazine Review

Roy Hartkopf VK3AOH
34 Toolangi Road
Alphington 3087

(G) General (C) Constructional. (P) Practical without detailed constructional information. (T) Theoretical. (N) Of particular interest to the Novice. (X) Computer program.

CQ	Sept 1988	Worldwide DX contest results (G).
CQ	Oct 1988	DX Contest, All time records (G).
CQ	Nov 1988	Packet Radio Special. Review of commercial products (G).
CQ	Dec 1988	Unusual call signs (G).
QST	Sept 1988	Parasitic suppression for modern tubes (P). Three channel emergency QRP transceiver (C). Simple 12 metre beam (C).
QST	Nov 1988	Log periodic HF dipoles (P).
Break In	Sept 1988	Wellington VHF group issue (G).
Radio Communication	Oct 1988	Modular multi-band transceiver.

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Rowland Bruce	VK5OU	SA Councillor
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Int'l Travel Host Exch	Ash Nallawalla	VK3CIT
QSL Manager	Neil Penfold	VK6NE
Standards	Peter Page	VK2APP
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	Ron Fisher	VK3OM
Videotape	John Ingham	VK5KG
WICEN	Ron Henderson	VK1RH

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DIVISIONS

VK1

Address: ACT Division, GPO Box 600, Canberra ACT 2601

Officers:

President	Alan Hawes	VK1WX
Secretary	Alex Johnson	VK1ZDX
Treasurer	Ken Ray	VK1KEN

Broadcasts: 3.570 MHz, 2m ch 6950, 70cm ch 8525, 2000 hrs Sun

Fees:

Full (metrop) (F)	$44.00
Associate (metrop) (A)	$44.00
Full (country) (C)	$44.00
Associate (country) (T)	$44.00
Pensioner (G)	$33.00
Student (S)	$31.00
Family (X)	$25.00

VK2

Address: NSW Division, 109 Wigram St, Parramatta NSW 2124, (PO Box 1066 Parramatta), Phone (02) 689 2417

Officers:

President	Roger Henley	VK2ZIG
Secretary	Andrew Keir	VK2AAK
Treasurer	David Horsfall	VK2KFU

Broadcasts: (R Denotes repeater) Times 1100 and 1930 on Sun; 1.845 MHz AM, 3.595 SSB, 7.146 AM (1100 only); 28.320 SSB, 52 120 SSB 52.525 FM; 144.120 SSB 147.000 FM(R) 438.525 FM(R); 585.500 (ATV Sound) Relays also conducted via many repeaters throughout NSW.

F	$41.50
A	$39.50
C	$41.50
T	$39.50
G	$34.50
S	$22.50
X	$24.50

VK3

Address: Victorian Division, 38 Taylor St, Ashburton Vic 3147, Phone (03) 259 9261

Officers:

President	Jim Linton	VK3PC
Secretary	Peter Mill	VK3ZPP
Treasurer	Rob Hailey	VK3XLZ

Broadcasts: 1.840 MHZ AM, 3.615 SSB, 7.085 SSB, 147.250 FM(R) Mt Macedon; 147.225 FM(R) Mt Baw Baw; 146.800 FM(R) Mildura; 438.075 FM(R) Mt St Leonard 1030 hrs on Sun

F	$50.00
A	$45.00
C	$50.00
T	$45.00
G	$38.00
S	$27.00
X	$27.00

VK4

Address: Queensland Division, GPO Box 638, Brisbane Qld 4001, Phone (07) 284 9075

Officers:

President	David Jones	VK4NLV
Secretary	John Aarsse	VK4QA
Treasurer	Eric Fittock	VK4NEF

Broadcasts: 3.650 MHz, 7.118, 14.342, 18.132, 21.175, 28.400, 52.525 regional 2m repeaters and 1296.100 0900 hrs Sunday. Repeated on 3.605 & 147.150 MHz, 1930 Mon

F	$45.00
A	$45.00
C	$45.00
T	$45.00
G	$36.00
S	$27.00
X	$27.00

VK5

Address: South Australian Division, Thebarton Rd, West Thebarton SA 5031, (GPO Box 1234) Adelaide SA 5001), Phone (08) 352 3428

Officers:

President	Don McDonald	VK5ADD
Secretary	Hans van der Zalm	VK5KHZ
Treasurer	Bill Wardrop	VK5AWM

Broadcasts: 1.820MHz AM, 3.550 MHz, 7.095, 14.175, 28.470, 53.100AM, 145.000 FM 147.000 FM(R) Adelaide; 146.650 FM(R) Naracoorte; 146.700 FM(R) Mid North; 146.900 FM(R) Mt. Gambier; 438.425 FM(R) Barossa; ATV Ch 34 579.00 Adelaide; ATV 444.250 Mid North; (NT)3.555, 146.500, 0900 hrs Sun

F	$44.00
A	$44.00
C	$44.00
T	$44.00
G	$35.00
S	$26.00
X	$26.00

VK6

Address: West Australian Division, PO Box 10, West Perth WA 6005

Officers:

President	Christine Bastin	VK6ZLZ
Secretary	Fred Parsonage	VK6PF
Treasurer	Cliff Bastin	VK6LZ

Broadcasts: 146.700 FM(R) Perth, at 0930 hrs Sun, relayed on 3.560 MHz, 7.075, 14.110, 14.175, 21.185, 28.485, 52.080, 438.525(R); Country relays 3.582, 147.350(R) Busselton 146.900(R) Mt William (Bunbury); Broadcast repeated on 3.560 at 1900 hrs.

F	$42.00
A	$42.00
C	$42.00
T	$42.00
G	$35.00
S	$22.00
X	$23.00

VK7

Address: Tasmanian Division, PO Box 1010, Launceston TAS 7250

Officers:

President	Mike Wilson	VK7ZWW
Secretary	Peter Frith	VK7PF
Treasurer	Peter King	VK7ZPK

Broadcasts: 146.700 MHZ FM (VK7RHT) at 0930 hrs Sun relayed on 147.000 (VK7RAA), 146.750 (VK7RNW), 3.570, 7.090, 14.170, 52.100, 144.100 (Hobart) Repeated Tues 3.590 at 1930 hrs

F	$42.00
A	$42.00
C	$42.00
T	$42.00
G	$38.00
S	$24.00
X	$22.00

VK8 (Northern Territory) is part of the VK5 Division and relays broadcasts from VK5 as shown (received on 14 or 28 MHz).
Note: all times are local. All frequencies MHz.

WIA NEWS

Bill Roper VK3ARZ, General Manager & Secretary

1989 FEDERAL CONVENTION

The 1989 Federal Convention of the WIA will be held at the Brighton Savoy Hotel/Motel in Melbourne from Sunday 23rd April until Tuesday 25th April 1989.

Elsewhere in this issue of Amateur Radio we have published those annual reports and agenda items which were received on or before 15th March 1989. All parties involved were advised of this closing date for publication, even though the legal closing date for these items to be included in the 1989 Federal Convention is 22nd March 1989.

What is a "Federal Convention"? A rose by any other name....?

"Federal Convention" is just a flash name (or, in today's jargon, should I say up-market name?) for the Annual General Meeting of the Federal Body of the WIA.

A high profile public figure recently said words to the effect that "....Australia is a country where 7 separate colonies are pretending to be a nation".

The WIA is a bit like that. Each Division of the WIA is a separate body, with its own constitution. The Federal Body of the WIA only has 7 members, the 7 Divisions. The nearly 8000 members of the WIA are not members of the Federal WIA, but are members of one or other of the various state Divisions.

The Federal Body consists of the Federal Council (a representative appointed from each of the seven Divisions, who are known as Federal Councillors), the general management group known as the Executive (often incorrectly called the Federal Executive) who are appointed by the seven Divisional representatives on Federal Council, and the Executive Office (previously often called the Federal Office) which carries out the day to day work of the Federal Body under the control of the Executive.

It could be accurately said that the Federal Body of the WIA solely exists as a vehicle created by the Divisions to bring about some unification of the seven Divisions of the WIA, by determining policy in those areas that affect the whole of Australia and not just one state, by liaising on behalf of the Divisions as one voice with Government, and by providing those member services, such as Amateur Radio and membership fee processing, which can be most cost efficiently carried out on behalf of the Divisions by a central body.

Under the present rather clumsy structure of the WIA, the Divisional appointees to the Federal Body only meet once a year at the Federal Convention/Annual General Meeting. Therefore, except under extraordinary circumstances, the major policies that determine the future of the WIA are only determined once a year!

From this rather simplistic explanation of the cumbersome hierarchy of the WIA I trust you now realise, amongst a number of other things, that, as a member of the WIA, you and your views are to be represented at this Federal Convention. And that the person acting on your behalf is your Divisional Federal Councillor.

Do you know who is your Federal Councillor?

If not, have a look at the WIA Directory on page 3 of this magazine.

Do you feel strongly about the WIA and the future of amateur radio as a hobby? Do you want your views represented at the 1989 Federal Convention?

Then make sure that you contact your Federal Councillor, before he departs for the Federal Convention, and let him know your point of view. That probably gives you about two weeks.

Make the most of it.

WIA NOT A SECRET SOCIETY

I have heard several comments recently that the WIA is like a secret society. "It does not tell its members what it is doing" I am told.

On the one hand I have some trouble understanding that sort of comment, particularly in view of the interesting and informative weekly news broadcasts transmitted by each of the seven Divisions, and the information contained within the pages of Amateur Radio.

On the other hand, however, I can accept the fact some members believe that, for an organisation that represents a group of people involved in communication, we do not communicate very effectively in some areas. Most particularly in relation to the proceedings of the meetings of the many and various groups that are part of the WIA.

Let's face it. Minutes of meetings are boring to most people, particularly to those who were not at that meeting. Who wants Divisional broadcasts and Amateur Radio filled with minutes of meetings?

At the Federal level, minutes of all meetings of the Executive are forwarded to Divisions within a week of the meeting. Minutes of the joint meetings conducted by the WIA with DOTC are forwarded to Divisions immediately the minutes have been jointly approved by the WIA and DOTC. And the minutes of the Federal Convention, a mammoth document, are forwarded to Divisions within two months of the Convention.

These minutes are not secret documents. If you are a member of the WIA and you want the opportunity to peruse them, then allyou have to do is contact the Federal Councillor for your Division. He, or she, will only be too pleased at your interest and arrange for you to see them. Perhaps even supply a copy to you.

But please realise that the minutes of the Federal Convention are a limited edition because of the cost, and a separate copy may not be available for you to take away.

AMATEUR POPULATION

A recent news item from the equivalent of the WIA in the United States of America, the American Radio Relay League, more commonly known as the ARRL, advises that the number of licensed radio amateurs in the USA has surpassed 440,000 for the first time in history.

The Federal Communications Commission figures as at 27th December 1988 showed a total of 440,311 licensed amateurs. This is particularly pleasing to the ARRL considering the recent concern about the possible slowing down of growth in the number of radio amateurs in the USA.

By way of comparison, the latest figures for radio amateurs in Australia licensed by the Department of Transport and Communications as at 30th September 1988, was 18,026, which included 239 repeaters and 38 beacons.

Some other interesting amateur population figures show the United Kingdom with approximately 66,750 licensed radio amateurs; Indonesia with 61,350; West Germany with 60,900; Canada with 24,400; the Soviet Union with 18,600; and New Zealand with 6,600. The figures that I have for Japan show only about 34,000 licensed radio amateurs, but this figure obviously excludes the hundreds of thousands of Japanese with low power internal licenses only.

NO-CODE LICENCE

Way back in 1954, due to the efforts of your society, the WIA, which represents the Amateur Service at Govern-

ment level, Australia became one of the first countries in the world, if not the first, to issue amateur radio licences without a Morse Code requirement. The latest figures available from the Australian licensing authority, the Department of Transport and Communications, show that 18% of current amateur radio licences are held by Limited Licencees, the name given to holders of the Australian code-less licence.

The ARRL has recently approached the WIA seeking comments on our experiences with this code-less licence.

The possible introduction of a code-less licence has become a big issue in the USA.

50 MHz BAND AND CHANNEL 0

As previously advised in Amateur Radio, the WIA is currently negotiating with DOTC with a view to achieving a set of operating conditions for the 50 MHz band which will be acceptable to all Australian radio amateurs, and will permit radio amateurs located in the mainland east coast states of Australia to operate below 52 MHz in co-existence with channel 0 television.

The latest reports from DOTC about the progress of the WIA submission, which was lodged on 20th January 1989, are favourable, indicating that it is still being processed in a steady manner. However, as was expected, it will apparently be some time yet before we receive a result.

The WIA received assistance, support and advice from a number of active 6 metre band amateurs from each call area in Australia when putting together the submission to DOTC. One amateur in particular put a tremendous amount of time, knowledge and ability into the submission, and that was Peter Stackpole, VK1RX.

Peter is an active 6 metre enthusiast and has been employed as a propagation engineer with DOTC since 1979. During that time he has been involved in the planning of many VHF radio, FM radio, and television services throughout Australia. In recent times Peter has been heavily involved in the planning of the new commercial UHF television services to be introduced into regional Australia.

Those of you aware of the unique set of problems that we have in Australia in regard to 6 metres would realise that it was not easy to decide the approach for the WIA submission.

It was obvious to the WIA that any form of extreme ambit claim, no matter how seemingly justified to us, would receive little serious attention from the authorities. Likewise, any submission that was unnecessarily complex would most likely be put aside in the "too hard" basket, and take for ever to be considered.

The seven major recommendations of the WIA submission were published on page 5 of March 1989 issue of Amateur Radio. When a decision is received from the authorities, the full technical details of the WIA submission will be made public.

LICENSING OF VNG, THE STANDARD TIME AND FREQUENCY SERVICE

Dr. Marion Leiba, Honorary Secretary of the VNG Users Consortium, advises that DOTC is reissuing the licence for VNG on 5 MHz, enabling continuous transmissions through until 7th June 1989. Marion is confident that VNG will be allowed to continue transmitting on 5 MHz beyond that date.

The VNG Users Consortium have applied for licences for 10 and 15 MHz, but these require approval from the International Frequency Registration Board, and from neighbouring countries to Australia, even though they are temporary licences.

Marion advises that DOTC are now giving top priority to the "permanent" licensing of VNG on 5, 10 and 15 MHz.

VK9 CALLSIGNS

Radio amateurs have been used to the first letter in the suffix of VK9 callsigns indicating in which territory or dependancy of Australia the station was located. This was as a result of an agreement made by the WIA with DOTC many years ago. Examples of this convenient system were VK9Z_ for Willis Island, and VK9M_ for Mellish Reef.

Unfortunately, as with the callsign listings for non-WIA members in the recent Australian Radio Amateur Call Book, we now have another situation where the new DOTC computer seems to be the tail wagging the dog.

A DOTC spokesman recently explained that, "due to the limitations of the DOTC computer system", VK9 callsigns are now issued on a random basis.

It seems to the WIA that, given the small number of VK9 callsigns issued, and the importance of a descriptive suffix in the international DX scene, surely DOTC could find a way to circumvent this limitation of their computer system.

This matter will be discussed with DOTC representatives at the next WIA/DOTC Joint Meeting.

AMATEUR LICENCE EXAMINATION DEVOLVEMENT

Early in 1988, the Department of Transport and Communications (DOTC), conducted a number of public forums on the devolution of Amateur operator certificate examinations. At that time DOTC announced it planned to commence the new procedure in the latter half of 1988 and called for submissions from clubs and educational bodies interested in participating.

In response to that request, a large number of submissions werereceived by DOTC, but months passed and nothing further was heard from this Government Department.

At the WIA/DOTC Joint Meeting held towards the end of 1988, the WIA expressed concern about the lack of response from DOTC to applicants for examiner positions.

I am now pleased to advise that action on devolvement of examinations has recommenced in DOTC. After long delays, apparently due to considerable reorganisation in the Department, Mr. Keith Carr-Glynn has been appointed to the new position of Examinations Officer. On 24th February 1989, Mr. Carr-Glynn forwarded out a two page explanatory letter to all parties who had expressed an interest in conducting amateur licence examinations, and enclosed a form to be completed and returned.

In this letter it was explained that, as well as being responsible for the management of devolution of theexaminations, the Examinations Officer will also be responsible for the setting, marking and overall conduct of all Amateur Examinations up to, and including, the final examinations before full devolution.

The letter also explained the situation regarding question banks which are currently held in 2 forms. One is hard copy and, including diagrams attached to the questions, consists of quite substantial documents. The second form of question bank is on a 5 1/4 inch, IBM formated floppy disk using a dBase III Plus database file. This disk question bank will be used in conjuction with a book of diagrams and formulae.

Eventually, DOTC hope to distribute a compiled program, using a dBase III Plus file to generate and print examination papers for use in Amateur examinations.

DOTC advise it is expected that, in due course, not only will the computer programs become freely available, but hard copies of the question banks

will also be distributed.

They expect the Morse Code generation program, which is compiled Turbo Pascal, will also be available on 5 1/4 inch disks.

In this letter of 24th February 1989, DOTC make the point that it is important to understand the Department can only approve examinations set by external bodies. The current legislation does not allow DOTC to approve or accredit individuals or organisations. "Accreditation", in DOTC's current interpretation, means that an individual or organisation has presented an examination to the Department for approval. To be accredited, the examination itself will have to be approved as to the form, balance, degree of difficulty and all the other things to be spelt out in the "Accreditation Package".

The WIA is certainly pleased that the matter of devolvement of amateur licence examinations is starting to move again after some considerable time stopped dead. However, it seems that itmay be some time yet before Australian amateurs will experience the benefits of full devolvement of their examinations.

NON-IONISING RADIATION

The subject of non-ionising radiation has been given a lot of publicity in recent times. Ross Adey, K6UI, who was originally a VK5, then a VK3 before moving to the USA quite a few years ago, is a world ranking researcher on this subject currently employed by the Veterans Administration at Loma Linda in California.

Apart from his medical qualifications, Ross is a Fellow of the Institute of Electrical and Electronic Engineers, and still subscribes to Amateur Radio.

When contacted recently, Ross regretted that he did not have the time to write an article for Amateur Radio on non-ionising radiation, but has sent us a one inch thick package of 21 papers on the subject for our use.

What we need now is a radio amateur with a very good medical background to read these papers and precis them for an article in Amateur Radio. If you can assist, please contact the Executive Office of the WIA as soon as practicable.

ADVERTISERS

Without HAMADS, Amateur Radio would be a much less interesting magazine. I know that you, just like the vast majority of readers, turn to the HAMADS section first before looking at any other part of the publication. And, of course, everybody realises that HAMADS has become a much more time-effective way of selling and buying equipment now that the lead times have been reduced from around 6 weeks to just 2 weeks.

But the real life blood of our magazine is the commercial advertisers. Without their advertisements, Amateur Radio would only be a shadow of its present self. You, the reader, would not be aware of the new and exciting products and services available to radio amateurs; and we, the publishers, would not have the income to continue to produce the magazine in its present form.

Advertisers only advertise in a publication if that expenditure of their advertising money produces sales enquiries. But how do they know whether their advertisement in Amateur Radio is working or not? Quite often the only way for an advertiser to measure the effectiveness of advertising in Amateur Radio, particularly when he has placed a similar advertisement in other publications, is for the enquirer to tell him where he read the advertisement.

Do you do that each time you visit or telephone one of the advertisers in Amateur Radio? I'll bet you don't!

So here is one very important way in which you can do your bit to help your WIA, and your magazine. Each time you contact one of the firms that advertise in Amateur Radio, tell them that you are contacting them because of their advertisement in Amateur Radio.

And make sure they realise it is the Amateur Radio that is the publication of the WIA, and not the other magazine which, surprise, surprise, has a very similar name!

FEBRUARY AND MARCH 1989 ISSUES OF AMATEUR RADIO

Favourable comments, and a number of very constructive suggestions, have been pouring into the Executive Office regarding the appearance of the last two issues of your magazine, Amateur Radio.

However, as was obvious with March 1989 issue, we still have a few teething problems to iron out with the new production method.

One omission was in relation to the excellent photograph of Bob Arnold, VK3ZBB which appeared on page 11. This photograph was reproduced with the kind permission of the Australian Newspaper. Somehow or other the credit did not make it to the printers.

In the February "Special Reference Issue" there were a number of errors and omissions. One of the problems of producing such an issue is obtaining up-to-date, correct information. We have heard several comments about the accuracy and completeness of some of the information, but very little in the way of detailed corrections have been received at the Executive Office.

Peter Sumner, VK8ZLX has advised that the Alice Springs 2 metre repeater has been on 146.950 MHz for 4 years, and not 147.000 MHz as we published.

Jenny Warrington, VK5ANW from ALARA has advised that the official ALARA Nets are held every Monday evening, and it is the monthly general meetings of ALARA that are held on the 4th Monday of each month, except December.

Robert Colsell, VK2AWA from the Coffs Harbour and District Amateur Radio Club, advises that his Club's HF net is held on Monday evenings at 2000 hours local time on 3609 kHz; and an informal net is held on the 6650 repeater on Friday evenings at the same time.

Can you help with updates of the reference data published in Amateur Radio?

INTERFERENCE TO RADIO AND TV RECEPTION

In the past the Australian Government has provided a free service, through the agency of the Department of Transport and Communications, whereby skilled technical officers investigated the causes of interference to television and radio reception. Virtually all of these cases of interference were resolved on a technical basis.

The WIA has been advised that the Government has decided to cut costs by requiring an up-front fee before any investigation of interference complaints is undertaken.

Recently, the Professional Radio & Electronics Institute has been conducting a campaign opposing this concept of charging a fee, mainly based on the argument that control of the radio spectrum is the responsibility of Government, and that interference free reception should be a right of every citizen in this country.

In discussions on this matter at the WIA/DOTC Joint Meeting held near the end of 1988, a DOTC spokesman advised that a DOTC Task Force was being set up to study the feasibility of introducing a fee structure for investigating interference complaints, but it was expected to be some months before the Task Force makes its findings

This DOTC spokesman gave an assurance to the WIA

that, if one of the options to be considered was to be that the person causing the interference is to be charged a fee, the WIA will be consulted.

ar

AMATEURS AND INTERFERENCE TO TV & RADIO RECEPTION

Also at that WIA/DOTC Meeting, the DOTC representatives told the WIA that "there is some concern in political circles that the rights of TV viewers and Broadcast listeners are being subordinated to the rights of a relatively small number of Amateur Stations".

The implied possibility of interference complaints involving amateur radio stations being resolved in the future by political expediency rather than on a technical basis, is a subject of grave concern to all radio amateurs, and is a matter which will be pursued strongly by the WIA.

ar

XIV COMMONWEALTH GAMES

The XIV Commonwealth Games are to be held in Auckland, New Zealand during January and February 1990. The NZART, the WIA equivalent in New Zealand, will establish a Commonwealth Games Station in the Games Village, and hopes to be using the callsign of either ZMXIVCG or ZM6CG.

In addition, the special prefix of ZM will be able to be used by all ZL amateur radio stations from the 1st June 1989 until the 10th February 1990, and a special XIV Commonwealth Games Award will be available to certificate and award hunters.

ar

CLUB CORNER

Old Timer's Luncheon

The 9th Biannual Luncheon meeting of the Radio Amateurs Old Timers Club (Qld), will be held at the Coorparoo RSL Club, 45 Holdsworth St., Coorparoo, Brisbane, 1100 hours, 30 April 1989.

The meeting would welcome all Old Timers having been licensed over 25 years or nearing 25 years. Entrance fee of $6.50 at the door, will cover lunch. For further information and to register, phone Bill Bentson, VK4QF, 07-870-8785 or Cress Everdell, VK4ZAO 07-208-5435. Apologies would be appreciated.

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RF Impedance Measurements

J. Hodkinson VK2BHO
PO Box 1511,
Wollongong
2500

Following is a method of RF impedance measurement that is suited to the radio amateur, is simple, needs little in the way of hardware, and the mathematics are done on a computer.

In July 1968, an article appeared in Amateur Radio titled "SWR indicators - Fact or Fiction" by the late Joe Reed VK2JR. A bold and outspoken article which was meant to stir the reader into the actual practice of experimenting for one's self. (See AR July 1968, pps 9, 10, 11)

The original method of calculation of the component values of the complex impedances was by graphing the relative measured values and measuring the resultants produced. While this was accurate, it was considered a slow and tedious method. The second article, which was to explain the mathematical solution, never appeared.

Over the years, a few attempts were made on the project but I never seemed to solve the problem. Then, after acquiring a computer, the project reappeared and a totally new approach was attempted.

First a series of simple programs were written to solve the examples as were shown in the original article. This, in itself, produced a new range of skills to write a program that would run and at the same time solve the tasks that were required. Finally, a complete program was produced which would produce the vector values of the complex load by simply inputing the three voltage readings produced at the test head.

Description - Operation

The principle of operation is based on the fact - that in a series circuit the current flowing in each element of the circuit is the same - a reference resistance is placed in series with the RF load to be measured, and a source of RF energy is applied to the test conditions, voltage sample readings are taken from across the supply, reference resistance and load. These values are then used to calculate the vectorial components of the circuit elements.

Construction - Comments

To allow operation at the higher frequencies, good VHF construction practices should be used; ie short leads and

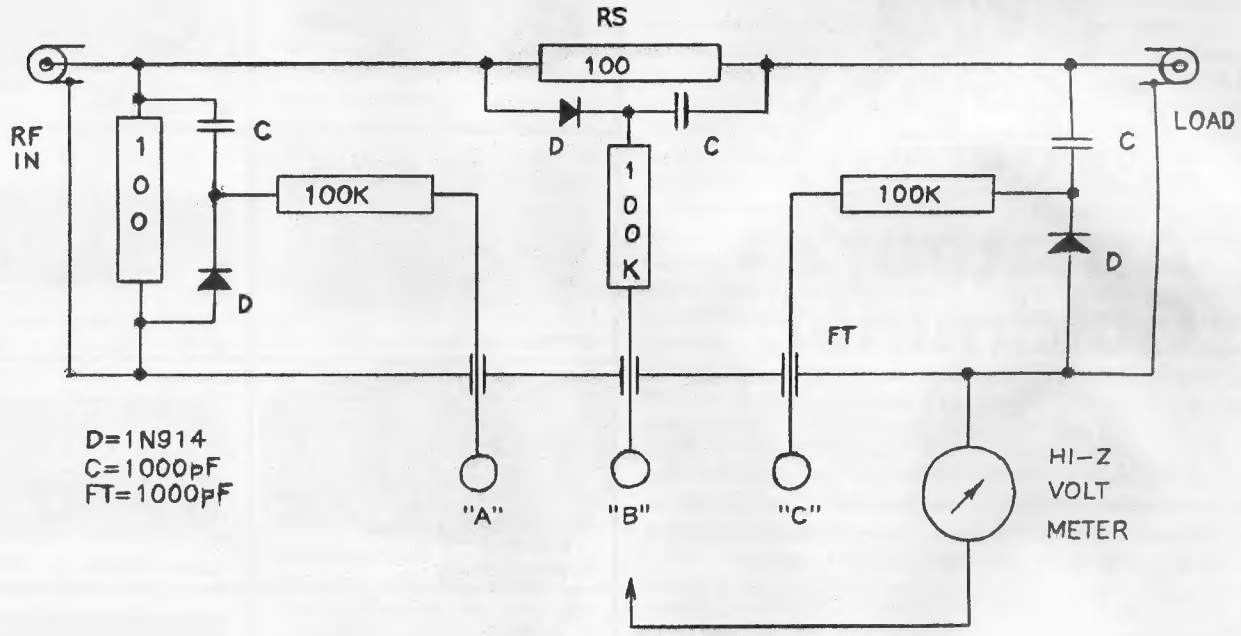


Figure 1: Circuit of the RF Impedance Measuring Head.
RS Reference resistor must be non-inductive. In the model it was 100 ohms. Best results were obtained when RS approximated the load, where the load is expected to be greatly removed from normal values (50 ohms) appropriate value would be used.
D = 1N914 C = 1000 pF FT = 1000 pF

sensible component layout and placement of input and output connections. Copper clad PC board is ideal, feed-through capacitors are recommended to bypass the metering outputs.

Measurements - Comments

The method of measurement requires the test head to be inserted in the feedline such that normal load conditions are maintained as closely as possible. Metering is then observed in position "A" and the RF energy is applied to the input, and the level of RF energy applied is adjusted so that approximately full scale is obtained using a high impedance meter on a low voltage range; eg 2.5 volt range. The actual value is not important. Once the circuit has settled, take careful note of the values for the three positions, ie "A", "B", "C", using the same range on the meter. The values are then used in the BASIC program to produce the vector values of the complex RF impedance load.

Limitations - Accuracy

Simple as you like, but because of its utter simplicity, the reactance component is of unknown sign, so to determine if the reactance is inductive or capacitive, the frequency must be changed or a known reactance connected across the load and a further test conducted. If the ratio of readings is such that reading "C" increases in relation to reading "B" then the reactance is positive "+J".

Trials - Comments

Using 28 MHz, test readings were taken with a series of test loads and the results were surprisingly accurate. The original article indicated that, by using a balun, balanced loads could also be measured though this has not been attempted. Both analog and digital voltmeters were used to take readings. On a few occasions, several fudge points were needed as the ability to read the analog meter and/or its accuracy would not compute. On checking, it was found that results were still more than accurate enough for normal amateur usage.

In conclusion, here is a different approach to RF impedance measurements. Simple, with minimum hardware and none of those hard-to-get bits, and it is now possible to see what the actual load components are when your SWR meter says your VSWR is 1:1.

Happy and successful experimenting.

RF Impedance Measurements

Figure 2 (a) Vector Diagram - Explanation of voltage moments.
Meter Units:
A = 280
B = 198
C = 147
Calculated:
Z = 74.2
R = 23.5
+- J = 70.7

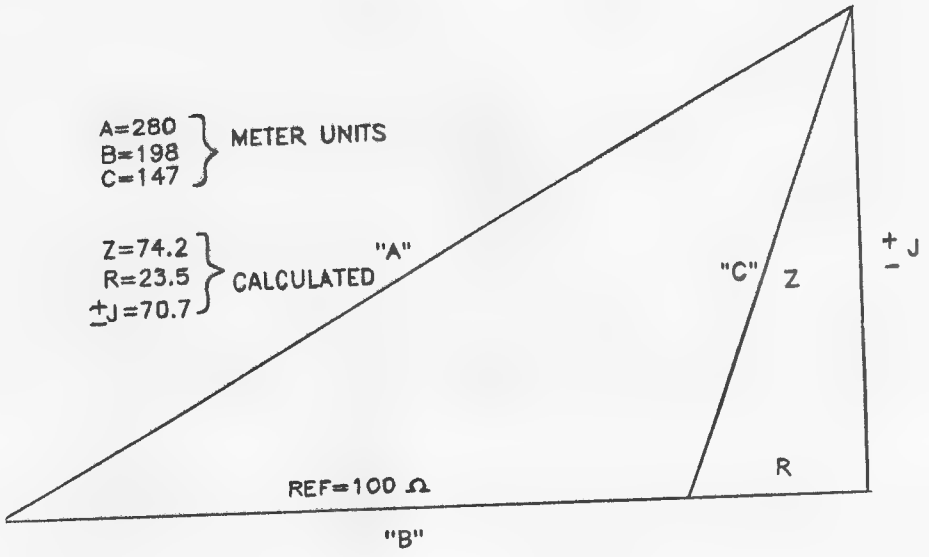
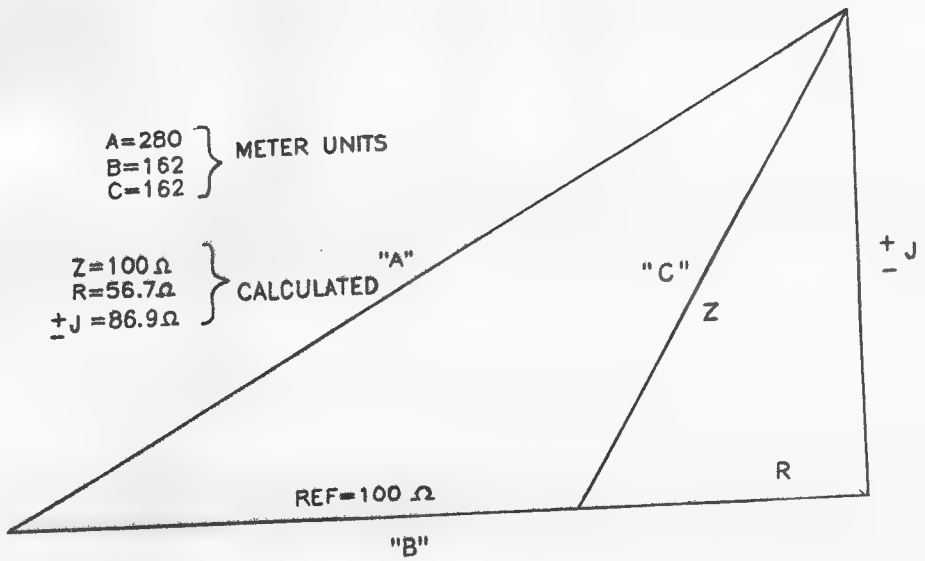


Figure 2 (b) Vector Diagram - Explanation of voltage moments.
Meter Units:
A = 280
B = 162
C = 162
Calculated:
Z = 100
R = 56.7
+- J = 86.9



```
100 CLS: PI = 3.141592654#
120 REM RS = SERIES SENSE RESISTOR VALUE CHANGED IF OTHER THAN 100 OHMS USED
140 RS = 100 : PI = 3.141592654# : RA = 180 / PI : A = 0 : RA
160 I=0 : IN=X/2 :
180 CLS : PRINT :PRINT "RF IMPEDANCE VECTOR CALCULATOR   VK2BHO 1988 " :PRINT
190 PRINT : PRINT "   INPUT ---- METER READINGS AS MEASURED AT TEST HEAD "
200 PRINT : INPUT " A READING ";A : IF A=0 THEN 200
220 PRINT : INPUT " B READING ";B : IF B=0 THEN 220
240 PRINT : INPUT " C READING ";C : IF C=0 THEN 240
260 IF (B=C) A THEN GOTO 1800
280 REM
300 REM
320 REM
340 X = (B*B + C*C - A*A) / (2*B*C) :B=A*A : C=B*B : A=C*C :
400 CO= ((( B 2+C 2 ) -A 2) /( 2*B*C))
420 IF  (B= C)OR  ;X=0
1000 REM CALC ANGLE FROM COS VALUE    -- IN = CO
1020  WH=CO    : X=1.57079632679#
1040 RE=CO  X)
1060 REM
1080 REM
1100 IF RE=WH GOTO 1200      :REM PRINT ANGLE
1120 IF RE WH THEN GOSUB 1500
1140 IF RE<WH THEN GOSUB 1600
1160 I=I+1 : PRINT "*";
1180 IF I  50 THEN GOTO 1040
1200 OA=X :REM IN RAD
1220 REM ANGLE CALCULATED IN RADIANS --- OUT AR RADIANS
1240 GOSUB 1700 : REM CONVERT TO DEGREES
1460 GOTO 2000
1480 END
1500 IF UP=0 AND  LO=0 THEN UP=1 : X=X+IN : RETURN
1520 IF LO=1 THEN IN=IN/2 : X=X+IN : LO=0 : UP=1 : RETURN
1540 X=X+IN : RETURN
1600 IF UP=0 AND  LO=0 THEN LO=1 : X=X-IN : RETURN
1620 IF UP=1 THEN IN=IN/2 : X=X-IN : LO=1 : UP=0 : RETURN
1640 X=X-IN : RETURN
1700 REM CONVERT RADIANS TO DEGREES
1710 RC=AR:IF RC>RA THEN GOTO 1800:IF RC<0 THEN GOTO 1800 :REM ERROR TRAP
1720 DE=AR :   DF=((DE*180)/PI)
1740 DE=0 : RC=0
1760 RETURN
1800 REM ERROR IN READINGS
1820 PRINT " CALCULATIONS CANNOT BE DONE WITH THE READINGS PROVIDED"
1840 PRINT " CHECK READINGS AND REMEASURE IF NECESSARY "
1860 PRINT   " RULES ****     B + C MUST > A  ,  B OR C MUST NOT < A  "
1870 PRINT "                    IF  B = ZERO  THEN  O/C   IF C = ZERO THEN S/C "
1880 GOTO 200
1900 PRINT  :REM TEST VALUE OF COS
1920 IF CO  1.5708 GOTO 1800
1940 IF CO >= 0 GOTO 1960 ELSE 1800
1960 RETURN
2000 REM CALC IMP VALUES
2010 PRINT
2020 OA=OA/RA :OA=SIN (OA)*Z :OC=Z/ TAN(OA)
2070  IF OC 5*Z THEN OC=Z
2071  IF OC <.002 THEN OC= 0
2075 REM IF OB <= 0 THEN OB= 0
2080 REM IF OB < Z THEN OB=Z
2040 PRINT :PRINT :PRINT  "LOAD --- COMPLEX IMPEDANCE =  ";Z; " OHMS"
2060 PRINT :PRINT  " RESISTIVE ELEMENT = " ;OC; " OHMS"
2080 PRINT :PRINT  " REACTIVE  ELEMENT = " ;OB; " + OR - J  OHMS "
2090 IF A=B+C THEN  PRINT :PRINT   " NON REACTIVE LOAD  AT THIS FREQUENCY "
2100 PRINT : PRINT :INPUT "ENTER NEW VALUES  ( N )   EXIT  ( X ) ";OS$
2110 IF OS$="N" OR   OS$="n" GOTO 100 :IF OS$="X" THEN PRINT "END"
2130 IF OS$="X" OR OS$="x" THEN PRINT "PROGRAM TERMINATED BY OPERATOR":ELSE GOTO
     2100
2140 END
```

Computer Program - written in GW BASIC for an IBM(C) or compatible. (A simplified version also ran on a VZ-200).

Portable or back-up battery use

Peter O'Keefe VK3YF
PO Box 654
Shepparton 3630

Firstly, let me say that what follows is one man's journey down the path of the wet-cell. I do not claim that what is stated is totally correct but from a number of telephone calls to battery manufacturers, a general picture emerges which seems to be at odds with many of my views and those of others. So read it, think about it and feel free to comment. If you are in possession of data on the subject I would be pleased to read it.

The story starts with a couple of "Deep Cycle" batteries used at my place of employment. They are the type described below in point 1. They supply back-up power for smoke detectors, alarm circuits, some control equipment and emergency lighting.

It was noticed that the battery charger seemed to be delivering excessive amounts of current to the batteries. The system is comprised of two 12 volt batteries in series to give around 28 volts. A charger is floated across the batteries at all times and is voltage but not current regulated. The charger is limited to 10 amps of current and up to this limit will supply the load as well as float the batteries.

The load was typically around two amps and under emergency conditions could rise to over 10 amps. It was deduced from the current meter that the batteries were receiving around three amps of constant charge over and above the current being drawn by the load. This started a quest to find out just what the charge rate for these batteries should be and what their working life was. The information discovered was relevant to both the work application and my amateur radio activities.

Inquiries revealed some interesting details:

1. Today what is commonly sold as a DEEP CYCLE battery has replaced the traditional battery of this type which is described in Point 2. It looks like a conventional automotive battery and can be used

in an automotive application with some precautions. The battery can only deliver about a quarter of the normal starting or cranking current of a automotive battery: 100-200 amps for 30 seconds as compared to 450 amps. This is adequate for a typical six cylinder petrol engine in a good state of tune. The cell will give a longer use on load for radio work, such as a 20 amp peak current SSB application. However, if you let the battery get very flat it can not be recharged by conventional means. It will require special treatment to return to a serviceable state. The battery is only guaranteed for six months instead of the usual 12 months and costs almost twice as much as an equivalent automotive type. The other disturbing news is that manufacturers quote a typical life of only a couple of years.

2. Traditional deep-cycle batteries are designed to allow moderate currents to be drawn for extended periods but have little heavy current capacity for starting applications. For example, the Dunlop 6M120 battery used by the State Electricity Commission of Victoria, and which finds its way onto the tender market and then into many amateur shacks, will give some hours of SSB use with peak currents of around 20 amps. The problem comes when you need to recharge the battery. It seems that the correct charging rate for one of these batteries is the order of 120 milli-amps. So, as you can see, recharging will take a long time. This comes about as these batteries are specifically designed to be used for line switching and emergency lighting applications. Today their on-load time is minimal. These batteries do have a long useful life and have some use in radio work. However, the very long recharging time reduces their practical use in emergency or extended portable operating. I might point out that the Mount Wombat repeater site uses a couple of these batteries to back-up VK3RGV repeater, VK3RPW packet repeater, 3/33 UHF CB repeater and several commercial units.

3. If money is not a problem you could purchase a set of Telecom two volt/500 amp or six volt/150 amp batteries for around $200 a cell. That is $1200 for six of the two volt units or $600 for a couple of the six volt units. These batteries typically have a very long service life. A set recently removed at my place of work had been in use for almost 20 years before failing. These cells are not built to endure vibration and can be destroyed in a mobile environment. A point which makes these batteries unattractive to the average person is that if one of the cells fail after a couple of years, it is often necessary to replace the entire lot. This is because big differences in cell condition make it impossible to correctly charge all cells in use.

4. This brings us back to today's standard wet cell automotive battery. The heavy duty 11 plate battery I recently purchased is marked as 450 cranking amp. This means that the battery will supply 450 amps for 30 seconds to comply with the Australian Standard or 220 amps for three minutes. The information I was given was that this battery would give in the order of two hours of SSB operation drawing 20 amps peak and still have enough in reserve to start the car. This would be at normal temperatures and assuming a day time operation, and so not using courtesy lights or other creature comforts. This type of battery will cost between $65 and $80. In fact, it would seem to me that the best system would be to use two automotive batteries, perhaps one of lower capacity and isolate one of them when the engine is stopped. This would leave one available to start the vehicle at the end of the exercise.

NOTE: The sealed gel type batteries sold today for automotive use are, in the words of the industry, strictly for starting and have very limited stationary capacity.

To keep batteries in good condition, the following suggestions were made:

(a) Keep electrolyte up to the required level.

(b) Check the SG of the cells from time to time using a Hydrometer. Cells should have a SG of at least 1230 when the battery has been left overnight.

(c) Keep leads and connections in a clean condition.

(d) Should the battery be allowed to discharge to the point that it will not start the car it will require a charge on a battery charger to restore full capacity.

This charge should be at approximately 14.4 volts and four amps for a nine plate battery or five amps for an 11 plate battery for about 12 hours. Four hours after gassing begins you can assums that the battery is fully charged. This "fully charged" state checked with a Hydrometer will depend on the condition of the battery.

Continued Page 64

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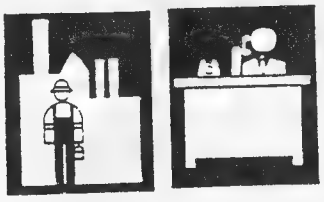

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CONVENTION INFORMATION

A decision was made at the 1988 Federal Convention that the annual reports by the various Federal Co-ordinators together with the agenda items for the next convention should be published in April AR. This was to permit members to find out in advance of the convention what subjects were to be discussed.

We present here all such material received by the Executive Office up to 15th March 1989

Annual Report of the Federal President for Year Ending 31st December, 1988

This past year has been a period of considerable change within the Federal sphere of the WIA. These changes have ranged from a change in the composition of the Executive, new appointments and procedures in the Executive Office, to new operating conditions on the amateur bands.

Executive Matters.

Executive office.

The position of Office Manager/General Manager has been filled by three people during the year. Ann McCurdy was the initial occupant but had to retire at the end of February pending major surgery. Earl Russell then filled in temporarily until the end of May. Bill Roper was subsequently appointed to this position. Ross Burstal joined the Executive Office in early November as the Assistant General Manager.

After a period of hospitalisation and recuperation, Ann McCurdy is now back in the office on a part time basis. Further details of the staffing of the Executive Office are provided in the General Manager's Report.

It should be noted that Bill Roper and Ross Burstal are still providing a considerable voluntary contribution to the work of the Executive Office. This practice, which includes considerable work on weekends and public holidays cannot continue.

Since commencing as General Manager, Bill has been able to review many of the aspects of operation of the office. This review has been based on the philosophy that the WIA is a "Service Organisation" and should appear this way to the members. This means not only being responsive to members by answering their correspondence promptly, but also by providing detailed management reports to the Executive on topics ranging from budget performance to correspondence and action item progress. This approach by Bill has streamlined the workings of the Executive and the Executive office.

Federal Executive.

For the first time, the Federal Council in April, 1988 appointed a number of interstate members to the Federal Executive. The members of the Executive elected or re-elected at that time were George Brzostowski, VK1GB, Brenda Edmonds, VK3KT, Ron Henderson, VK1RH, (Vice Chairman), Peter Page, VK2APP, Ray Roche, VK1ZJR, Bill Rice, VK3ABP, David Wardlaw, VK3ADW, and Bill Wardrop, VK5AWM. Kathy Gluyas, VK3XBA, was co-opted in December, 1988 by the Executive to fill a remaining vacancy. Ray Roche tendered his resignation in February, 1989.

During the year the Executive has met on 15 occasions, with three of these meetings being all-day Saturday meetings and one being a two-day weekend meeting.

It was disappointing that sufficient money was not set aside for travel purposes as this has resulted in considerable difficulties for some of the interstate members of the Executive. However, the initiative has been worthwhile and should be continued.

Corporate Planning.

As part of the action on Federal Convention Resolutions 87.08.01/1 and 88.08.01/1, the Executive held a one day review meeting on Corporate Planning in August. This resulted in the development of a mission statement for the WIA and the listing and prioritisation of around thirty key issues. There has been some follow-up work from this session, however, there still remains work to be completed. A number of motions presented to the 1989 Convention are based on the issues raised.

Bicentennial Year.

During the year extensive use was made of the special Bicentennial "VI88" call signs. The use of these call signs, together with the operation of an amateur radio station in conjunction with EXPO '88, certainly gave a lot of international publicity to Australia's 200th birthday celebrations.

International Matters.

Australia was represented at the International Amateur Radio Union Region 3 Conference, held in Seoul during October, 1988, by David Wardlaw and Ron Henderson. Some of the reports from that conference have already been printed in AMATEUR RADIO magazine. Two of the key issues at this conference, Band Planning and Packet Radio, have given rise to motions to be presented to the 1989 Convention.

It is anticipated that there will be a World Administrative Radio Conference in 1992. Preparation for that Conference has already started, but activity will need to substantially increase. The preparation will not only include the important topics of Band Plans and Spectrum Planning, but also the mundane issue of raising funds to support a delegation to the conference, which will be held in Geneva.

DOTC Matters

On the 1st June, 1988, Novice Licencees gained restricted access to the 2 metre band. I happened to be in Perth at the time, and welcomed a number of operators to the band using the VI88WIA call sign.

The Development of Examinations issue has proceeded at a very slow pace due to difficulties within the Department. However, with a recent new appointment to the position of Examinations Officer, it is expected that considerable progress will be made in the coming months.

Notification of the loss of Amateur Transmitting Privileges in the 50 cm band with effect from 1st March, 1989, was received from the Department. However, existing ATV repeaters will continue to be re-licensed until that particular UHF channel is required in that area. The WIA has tried (and is continuing to try) to provide an alternative mechanism for the continued use of this part of the spectrum by ATV activities. It is noted that a prime aim of many of these transmissions is educational. It is obvious from the way this issue has progressed here in Australia, and the way similar issues are being handled in overseas countries, that pressure on the spectrum is increasing. This means that an increasing amount of resources of Amateur Radio Societies around the world will have to be devoted to defending our allocated bands.

The negotiations and debate on the

issue of Third Party Traffic is continuing. From the information coming from other parts of the world, it would appear that Australia currently has the most restrictive TPT conditions in the world.

A review of the method of handling interference complaints is currently being conducted by the Department. The outcome of this could be serious for all radio spectrum users. The WIA is continuing to monitor this matter.

Divisional Visits.

During the year I have been able to meet with the Divisional Councils of VK1, 2, 4, 5 6 and 7, and with the President and Secretary of the VK3 Division. I would like to thank the Divisional Councillors for their hospitality on these occasions. Other members of the Executive have also visited a number of Divisions and a number of field days and club activities have also featured on the travel itinerary.

Thanks.

There are many volunteer Co-ordinators who contribute to the activities of the WIA on behalf of the Executive. On behalf of all members of the WIA, I would like to thank the following people for their efforts:

Graham Ratcliff	Amsat
Ken Hall and Ken Gott	Awards Managers
Frank Beech	Contest Manager
Brenda Edmonds	Education
Hans Ruckert	EMC
John Edmonds	Historian
Bill Martin and Bill Horner	Intruder Watch
Ash Nallawalla	International Travel Host Exchange
Neil Penfold	QSL Manager
Peter Page and Ron Henderson	Standards
Bill Roper and Ron Fisher	Tapes (Federal News)
John Ingham	Tapes (Video)

I would also like to thank the members of the Executive, particularly Ron Henderson, and the Office Staff, especially Bill Roper, for their support and encouragement during what has been a very busy year for me.

Peter Gamble, VK3YRP
Federal President.

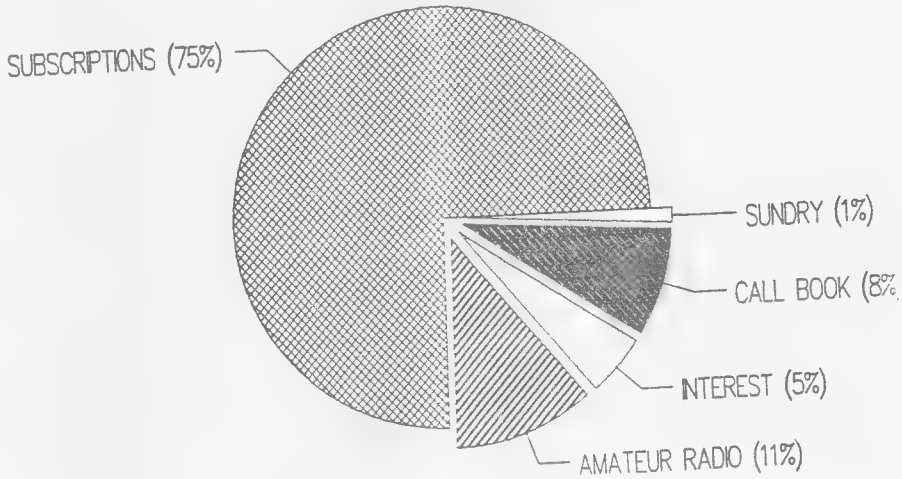
Financial Report For 1988

The full financial statements of the Federal Body of the WIA for 1988, audited by Touche Ross and Company, will be submitted to the 1989 Federal Convention.

Complete publication of those statements in Amateur Radio would not only take up a lot of space, but would also be boring to most members.

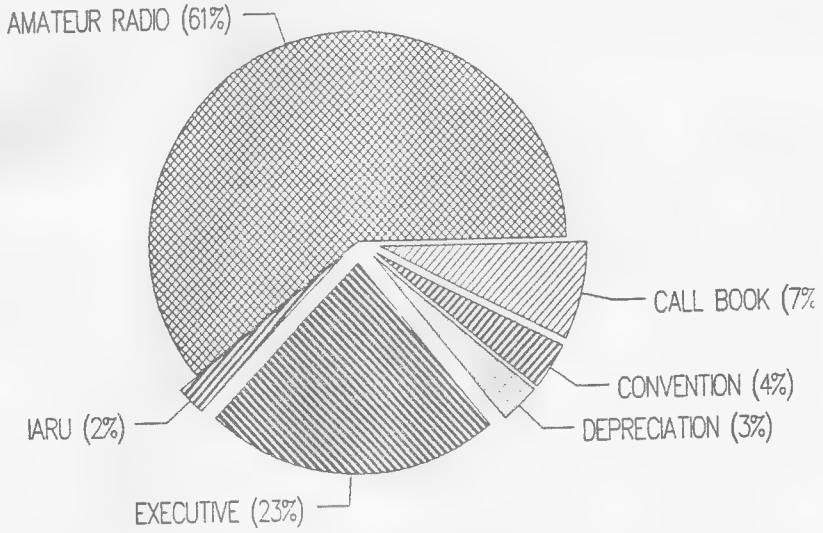
Therefore, the following is a precis of the Financial Report being submitted to the 1989 Federal Convention, together with some pie charts. If you would like to see a copy of the complete financial statements, then contact your Divisional Federal Councillor who will only be too pleased to arrange for you to see a copy. If this is not practicable, then copies may be available

1988 INCOME



Total Income $352,020

1988 EXPENDITURE



Total Expenditure $358,001

by contacting the Executive Office.

The appointment of an interstate member of Executive as the Federal Treasurer of the WIA was an interesting experiment. It is now apparent that the Federal Treasurer must not only be based within easy access distance to the Executive Office, but should have financial qualifications.

Because distance has precluded the Federal Treasurer from performing his duties, I have been acting in the dual role of accountant/bookkeeper and Treasurer.

The budget for 1988 was determined at the 1987 Federal Convention, 8 months prior to the commencement of the 1988 financial year, and budgeted for a loss of $10,000.

A non-profit organisation such as the WIA should NEVER budget for a loss! A non-profit body can only make capital expenditure for fixed assets, such as equipment and furniture, from Accumulated Profits!

Based on this budget, which set the membership fee income for the year, the Federal Body incurred a net loss on operations for the year of $5981

The main reasons for this better-than-expected result were:-

Improved financial management procedures;

The use of extensive volunteer labour from the employees of the Executive Office in an attempt to keep the salaries expenses down despite the much increased work load; and

Publication of the 1988 Australian Radio Amateur Call Book.

Some of the more significant aspects of the audited 1988 financial statements include the following:

AR Advertising, a major source of income, was $11,400 under budget after allowing for the $9,730 book entry relating to the contra advertising arrangements with AEM and ETI magazines. The Executive Office received no help from any of the Divisions during the year in obtaining advertising for Amateur Radio!

MagPubs, despite being transferred in July 1988 to a volunteer sub-committee in the VK2 Division, was still a $8,800 loss to the Federal finances when the relevant proportion of the Executive Office overheads were taken into consideration.

It is disappointing to note the virtual cessation of Federal MagPubs operations since that transfer.

Interest Received was $5,000 under budget because interest rates during 1988 were substantially lower than they were at the time the budget was set.

Direct Subscriptions received from overseas subscribers was $3,000 over budget and is a positive reflection of the increasing popularity of Amateur Radio magazine internationally.

The various expenses involved in the publication of Amateur Radio were held very close to budget, except for Wrapping & Addressing, which was $1,400 over budget, and Bulk Posts which was $4,800 under budget because the expected dramatic increases in Category B postal rates did not eventuate.

Promotion/Advertising/Recruitment was $8,800 over budget because, for the first time, proper accounting entries were made in relation to the contra advertising arrangements the WIA has with commercial electronics magazines.

Executive Travel was $2,250 under budget only because the Federal President and Vice President were able to visit Divisions as part of their employment travels around Australia.

The 1988 Australian Radio Amateur Call Book produced a profit of less than $2,000 after deducting the commission payable to

COVER

THE COVER PICTURE is of one of the oldest devices used in radio, a crystal receiver. It was built by Don Law VK2AIL of Tumblong NSW in order to experiment with various detectors beside the traditional cat's whisker and galena.

Don writes: "A modern version of an old design. The cat's whisker assembly was machined to original specifications and the crystal is a piece of galena kindly donated by Sydney Science Museum in 1984. A wide variety of semiconductor material was experimented with, but a (now, but not in the 1920's) common germanium diode proved superior to all".

As an interesting twist to the investigation Don added a more modern component, a tunnel diode, to the circuit. This permitted, in effect, the injection of negative resistance into the tuned circuit, thus improving gain and selectivity. The adjustment procedure (see circuit) is:

1. Set 100K pot to maximum (top).

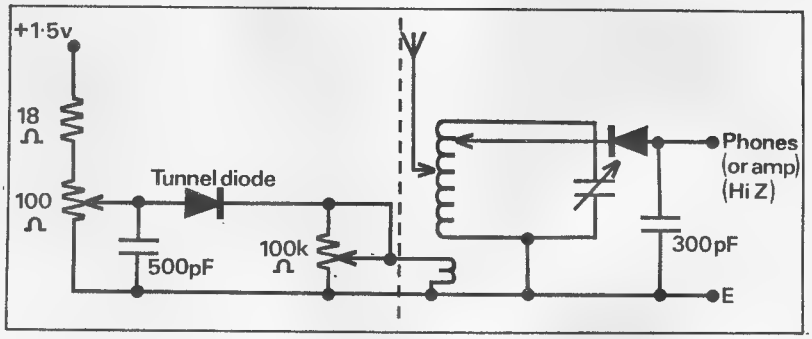
2. Adjust 100 ohm pot for oscillation (ie in negative resistance region).

3. Re-set 100K pot for oscillation just to stop (for AM reception) or just continue (for CW).

4. Optimise antenna and crystal coil taps (and then repeat step 3!)

Unfortunately, Don's soldering iron slipped and caused the tunnel diode to go open-circuit.

He then found that, these days, tunnel diodes are nearly as rare as cat's whiskers detectors! Consequently, we do not suggest this as a project for everyone's amusement, but it does make a pretty picture, doesn't it?



the Australian Government Publishing Service for the "privilege" of publishing the Call Book, and the Executive Office overheads. The poor quality of the amateur radio station callsign information supplied from DOTC, resulting in hundreds of hours of unnecessary work by the WIA, is beyond normal comprehension.

Salaries & Secretarial costs were $16,700 over budget for the year. Considering the increased operations of the Executive Office during the year, this was a small increase.

A financial anomaly that became apparent during the year was the proportion of the Federal component of membership fees which is determined as the "AR component". In determining this amount, the Executive Office costs portion has been calculated in the past at 25% of the total Executive Office costs. Informed analysis now shows that figure should be 45%.

Therefore, instead of the AR component of $16.25 for 1988, as set at the 1987 Federal Convention, the actual figure was $21.39. This means that each issue of Amateur Radio, posted to the member, cost $1.78.

It also means that, instead of the sum of $13.00 determined at the 1987 Federal Convention, the Executive and the Executive Office performed all the other activities on behalf of the Divisions on the basis of only $7.86 income per member.

When considering the cost to the members for the operations performed by the Executive and the Executive Office on behalf of Divisions, it should be realised that, although inflation in Australia over the 10 years to 1988 was 131%, the Federal component of members fees only increased during that time by 100%.

In order to continue to function at a proper level of efficiency, the Federal operation of the WIA needs more fee income. The major sources of this income can only be derived, under normal circumstances by:

Increased advertising income for Amateur Radio.

Increased membership of the WIA.

Increased membership fees.

The Divisions of the WIA, who appoint the Executive, and hence the Executive Office, to work on their behalf, need to either:

Quickly find additional, competent volunteer labour; or

Pay for professionals to perform the necessary workif the WIA is to continue as an effective, viable service organisation representing the radio amateurs of Australia.

Bill Roper, VK3ARZ
General Manager & Secretary

Annual Report of the Publications Committee for the Year Ended 31st December, 1988

In the Publications Committee Report last year, I used the adjective "turbulent" to describe the fortunes of the magazine "Amateur Radio" during 1987. The situation is now different in most areas, yet "turbulent" still seems the best description to apply to 1988!

We began 1988 with the January issue which might well not have been printed, had things gone a little differently. As discussed in last year's report there was a proposition to save some money by skipping January, since the expenses versus budget figures looked so gloomy. Nevertheless, January was published, and in May we reverted to full colour covers, which had been eliminated as from August 1987, again to save some expense. There were two reasons for these actions, one being that an unattractive magazine would not encourage new members to join; but the other, perhaps even more important, was the need to expand advertising, which depended vitally on being able to display an attractive publication to the potential advertiser.

It was also realised early in the year that advertising sales would be improved if advertisers could be given reliable data on the audience they would reach through AR. Statistics as to how many WIA members were gardeners or photographers or personal computer users would obviously help to assess the magazine's value in selling fertiliser, film or floppy disks. A survey form was designed, suitable for computer analysis, and refined over a period of some months, with the aim of gaining this type of statistical data on our readership. It was combined with another batch of questions to evaluate the areas of WIA activity and services in which members felt our performance could be improved or our aims needed alteration. Development of this survey was largely the responsibility of Bruce Kendall, VK3WL, Brenda Edmonds, VK3KT, and the Executive Office, and the computer programs to facilitate input of raw data and extraction of statistics were also developed in the Executive Office. The survey form was circulated as a centrefold to the October issue of Amateur Radio, with a number of "lucky dip" prizes being offered to encourage early return of completed forms. The number returned was rather less than 2000, but this is more than sufficient to provide a good statistical picture. Analysis of the results has been slow, as only volunteer effort was available for the tedious task of "punching in" the raw data. Most of the volunteers were from the Publications Committee. Full results should be available to the 1989 Federal Convention.

There have been two topics of discussion during the year, on which it has not been possible to reach any conclusions, due to the rapidity with which circumstances are changing. These are the possibility, or viability, of some kind of joint publishing activity with NZART by means of which, hopefully, both AR and "Break In" might achieve improved economy. The other area is the establishment of more precisely detailed terms of reference regarding the responsibilities and operation of the Publications Committee. In both cases the situation as it involves the magazine has been so fluid during 1988 as to make firm decisions difficult and the best policy one of permitting fast and flexible reaction to changes.

Financially, "Amateur Radio" has finished 1988 ahead of budget, even though it looked earlier in the year as if a deficit was inevitable. This has been partly due to improving advertising sales, because of the reversion to the more attractive style and colour and mainly to an aggressive campaign by the General Manager to recruit more advertisers. But the main reason for the surplus has been the improved financial management in the Executive Office which resulted in substantial economies being achieved by Betken Productions through the year.

Unfortunately, notice was given by Betken in November that, due to health problems, they could not continue production of AR beyond the January 1989 issue. The words "turbulence" and "flexibility" once more became relevant as the General Manager sought alternative means of keeping the magazine alive. But that is another story, to be told in next year's report!

During the year the long standing lack of decision, regarding the Call Book contract with DOTC, was resolved in favour of the WIA, so that a 1988 Bi-Centennial Call Book became possible. There were many problems, involving such items as data transfer from DOTC records, space limitations for reference information, and the late stage of the year at which work could begin. Nevertheless, the Call Book came out in November, and sold out within a couple of months, in spite of criticism by many, much of it justifiable. But many of the shortcomings which inspired criticism sprang directly from the problems mentioned and could not realistically be anticipated.

There have been numerous changes in the composition of the Publications Com-

mittee. In April we welcomed Jim Linton, VK3PC to the newly created position of News Editor; and since then Jim has amply demonstrated his journalistic ability to find news stories and put them into print many times over. Since his elevation to Federal President at last year's Convention, Peter Gamble, VK3YRP could obviously not be expected to have time to continue with the Committee as a Technical Editor, so his resignation was reluctantly accepted in May. In August, Doug McArthur, VK3UM also resigned due to work commitments, and with him went the "Technical Mailbox" column which he had run virtually single handed since its inception.

For a few months, around mid-year, we had some assistance from a group of VK2's as Technical Editors. Unfortunately, it seemed that all were also deeply involved with VK2 Council and simply had insufficient spare time for editorial work as well. The Queensland Division came to the rescue, and technical editing is now being done by David Brownsey, VK4AFA, Peter O'Connor, VK4KIP and Phillip Steen, VK4APA. Don Graham, VK6HK is also helping in this area.

Finally, after several possible contributors were approached, but declined for various reasons, it now seems that we have found a DX Editor. This information, more correctly though, should be part of the 1989 report, as Pat Kelly, VK2RZ did not take up the position until February 1989.

In conclusion, as usual, I do wish to thank all those who have helped with AR in 1988. All Committee members, past and present. The General Manager and his staff. Betken and their sub-contractors. My gratitude to you all!

Bill Rice, VK3ABP
Editor

IARU Liaison Report

The major IARU event of 1988 was the Region 3 Conference held in Seoul during October.

The WIA was represented by David Wardlaw VK3ADW and Ron Henderson VK1RH.

The main topics covered at the Conference were:

1.Band Planning.
2.Packet Radio.
3. Future ITU Conferences. (Planning for and current action required)
4. Use of Amateur Bands in Region 3. (Concern was expressed as to the low usage of the WARC Bands)
5.Improvements in the IARU Constitution.
6.EMC
7.Amateur Satellites.
8.Finances.

A comprehensive report of the Seoul Conference is contained in "Amateur Radio" December 1988 and January 1989.

At last year's Federal Convention it was suggested by Executive that a three man team should represent the WIA at the Region 3 Association Conference in Seoul. However, the council felt that 2 would be adequate. On arrival in Seoul the WIA Delegates found that the other major Societies were represented by at least 3; in fact there were 5 from NZART.

As it happened there were 3 major working groups dealing with matters of vital importance to Australian Amateurs. Two of these groups were chaired by the WIA delegates. The fact that the working groups met simultaneously made it difficult to input Australian opinion into the third working group.

David Wardlaw VK3ADW has been appointed a Director of the IARU Region 3 Association for the next 3 years. He replaces Michael Owen VK3KI who is now living in England. Michael has been nominated as Vice-President of the IARU and will take office this year for a five year term. This is a great honor for the WIA, as Michael is a past Federal President of the WIA, whose association with the IARU goes back many years having been a Director of the IARU Region 3 Association since 1971.

While on a trip to Europe, David Wardlaw VK3ADW was able to represent the WIA at the RSGB. 75th Anniversary celebrations and also participate in several international discussion groups.

With the approach of a possible WARC in 1992, the coordination of proposals and effort by member societies, by the IARU will become of utmost importance.

David Wardlaw VK3ADW
IARU Liaison Officer

Report of Federal Technical Advisory Committee for Year Ending 31st December, 1988

Strong Points.

FTAC has continued to be active in matters technical. Two newsletters have been issued, one in 1988 and one recently. FTAC was also involved in preparation of papers for the WIA delegation to the IARU Region 3 Conference in Seoul in October 1988.

Band planning activities have included seeking agreement to a 14 MHz packet proposal for IARU Region 3 and revision of the Australian band plans post Seoul. A motion to adopt the revised plans, as published in January 1989 AR, has been prepared for this Convention.

A beacon listing, incorporating revisions from VK1, VK2 and VK4, was published in the February 1989 AR and placed on the WIA bulletin board. A motion has been prepared for this Convention concerning a change of frequencies and operating modes for the 28 MHz beacons following Seoul 1988.

FTAC has been busy with site compatibility problems for amateur repeaters which share busy communications sites with many other services. FTAC predicts this work will increase in volume in years to come. The repeater listing, which also incorporated revisions from VK1, VK2 and VK4, was published in February 1989 AR and placed on the WIA bulletin board. FTAC notes and supports a motion before this Convention on repeater technical standards and siting considerations.

In addition to the 14 MHz packet frequency matter noted above, FTAC has completed another packet radio paper and submitted it to this Convention. This second paper does not set out to be prescriptive but rather aims to establish guidelines whereby data mode operators can develop their modes and peacefully co-exist with fellow amateurs. FTAC prefers to let the experts get on with their experimenting and development, offering its services only should co-ordination be required or problems need resolution.

During the year some 5 VHF/UHF record claims were processed and the current Australian records published in February 1989 AR. Two record claims remain outstanding awaiting further information. A new method of calculating record distances, adopted by Region 3 at Seoul 1988, is being evaluated for possible adoption by the WIA.

Problems.

The biggest problem that has faced FTAC for two years now, is apparent inactivity on the part of those who have undertaken, at Federal Conventions, to resolve or finalise matters associated with the 1296 MHz band plan and with pager interference. The first matter is proving embarrassing for we are not yet able to advise DOTC of confirmation of the bandplan adopted, subject to compatibility tests, a year ago. On the second issue tests, with repeater inputs/outputs reversed above 147 MHz, have not yet been reported to

FTAC. Indeed, it appears as though FTAC will be associated with those tests as a result of site compatibility problems at Goulburn.

Few replies have been received to FTAC correspondence and little information has been volunteered, making it difficult for FTAC to operate in a vacuum.

FTAC has been in existence for several years now and it is opportune to revise its structure and modus operandi. This action has been accelerated by the recent resignation of Ray Roche, VK1ZJR, as FTAC Chairman. Experience has shown more effective communications can be achieved through Divisional Federal Councillors rather than direct to Divisional TAC reps. FTAC also believes its panel of technical experts needs to be more dynamic, changing to complement the changing demands upon it as the needs arise.

Summary of the Year

The year just gone by has been one in which FTAC has brought a number of matters to finality and hopefully several remaining long drawn out actions can also be completed soon.

Recommendations

It is recommended:

FTAC adopt the method of record distance calculations adopted by Region 3 at Seoul 1988 if it proves to have adequate accuracy.

FTAC be restructured to be a corresponding committee of invited technical experts, let by a co-ordinator. All dealings with Divisions being through their Federal Councillors in the first instance, rather than directed to designated persons.

FTAC commend to the Federal Council three FTAC initiated motions appearing elsewhere upon the agenda. They are concerned with revised Australian band plans, 28MHz beacon planning and packet radio guidelines. FTAC also endorses the VK1 motion concerned with repeater technical standards and site engineering.

Federal Technical Advisory Committee.

TELL THE ADVERTISER
YOU SAW IT IN 'AR'

Report of Federal WICEN Coordinator for Year Ending 31st December 1988

Achievements

The high point of WICEN activities during 1988 was the increased involvement in Bicentenary Celebration Activities. There was one national exercise involving most States and a number of State exercises of greater scale than is normally conducted by Divisional WICEN organisations.

Liaison has been effected between NDO and WICEN, and also with the Australian Traffic Network following a visit to the Federal Office by an ATN officer, who saw a need for WICEN and ATN to become closer related. The matter was pursued at a second meeting. However, the objectives or reasons for existence of each organisation are so different I am unable to recommend any formal linking. This does not preclude operators belonging to both organisations. In the course of discussion I made the point that the trained WICEN operator generally does not wish to be committed each evening to traffic handling, and his involvement was more in a surge capacity during the early phases of a natural disaster.

I do not believe the differing procedures are a handicap should someone wish to be involved in both groups.

I assisted the ATN to seek the loan of a portable 2 metre repeater for potential deployment to Armenia. The matter of WICEN operators going overseas to assist with disaster communications is one for agreement between the requesting authority, the Divisional WICEN group, and the individual. I have strong personal reservations on chasing after disasters, particularly overseas, firmly believing that the amateur involvement occurs during the onset phase and is soon eclipsed by the regular communicators. I welcome WIA guidance in this matter.

I have regularly commented that to volunteer a capability that is patently not achievable does little for the credibility of the Amateur Service. Sadly, this point is frequently not realised.

Problems

Two problems are worth raising. Neither is new and both regularly recur. The first relates to obtaining clear WICEN frequencies, and the second is concerned with the relationships between WICEN groups and their Divisions.

At least one other nation's amateur emergency communications organisation has nominated calling frequencies just inside the top edge of each band. Should we adopt this approach we would exclude many of our novice operators. I do not think DOTC would be amenable, in the current climate, to granting a concession to novices for training exercises. Disaster situations are, of course, a different matter. However, we must be able to train as we operate.

Perhaps a solution available to us is to make greater use of distinctive callsigns in the WIA - WIZ series, although DOTC's recent callsign issuing policy changes have not helped this approach.

On the second problem, I have been recommending for some years that WICEN groups seek clear and unambiguous terms of reference, and the current situation merely reinforces that advice.

Summary of Year

The year gone by has been, for WICEN, a busy and satisfying one. Let us keep up the service but at a stable and achievable rate.

I have been Federal WICEN Co-ordinator for a number of years and believe, with my other WIA commitments, I should now stand down.

Recommendations

It is recommended WICEN groups adopt a policy of not normally loaning their equipment for use outside Australia.

R.G. Henderson, VK1RH
Federal WICEN Coordinator

Provisional Microwave Bandplans Revision.

The January 1989 issue of AR contained an article "Proposed Revised Australian Band Plans" prepared by FTAC. Two beacon matters in that article require clarification:

1.Firstly, the 28MHz beacon segment is 28.2 to 28.3 MHz for existing beacons, to be cleared by 1 January 1990 when a new segment 28.19 to 28.20 MHz takes its place. This new beacon segment will accommodate a world wide time shared frequency (28.19 MHz) plus a number of regional time shared frequencies. It is reasonable to expect that Australasia will be allocated one of those frequencies.

2.Australian microwave experimenters have recommended the narrow band modes beacon segment be shifted marginally to become 10368.00 to 10368.40 MHz. Both these points will be included in the Proposed Revised Australian Band Plans. Federal Convention Agenda item 89.09.01, to be considered by the Federal Council in April, 1989.

Report of Federal Contest Manager for Year Ending 31st December, 1988

Both of the wide spectrum contests, the John Moyle Memorial Contest and the Remembrance Day Contest, enjoy wide support. However, problems exist with the Ross Hull Memorial Contest and, despite attempts over many years to attract those who do participate to send in a log, the actual response is very disappointing.

During 1988 a determined effort was made to eliminate some bottlenecks that had, in the past, caused delays in the issue of contest certificates to those who had earned them. With the system that is now in place, and with the typesetting facility available at the Executive Office, all certificates should be delivered shortly after the contest results are known.

The standard of logs continues to improve and this makes the adjudication much easier. A small number of amateurs, however, still submit logs that are written with soft black lead pencils which, when handled many times in the checking process, become very difficult to read.

I am concerned about the provision in the Disqualification Criteria that precludes an amateur who has had a contest entry disqualified for any reason from participating in the contest the following year. This, I think, is a rather draconian measure that, in my opinion, could deter many amateurs from joining in any contest. The disqualification of an amateur from any contest is in itself sufficient punishment and I do not think that any bar should be placed on future contest activity.

During late January, 1989, I ran a trial VHF/UHF Field Day Contest in order to gauge the response from the VHF fraternity for such a contest. The rules were similar to those used in successful ARRL and RSGB contests. As results are still coming in, it is too early yet to report with details of the activity generated etc. This action was taken to see if a VHF only National Field Day Contest could become popular. If so, the Ross Hull Memorial Contest could then become a UHF only contest held over a much longer period.

Contest Reports:

Ross Hull Memorial Contest

This contest, with the annual reduction in entries that appear on the contest manager's desk, remains a disappointment. The number of valid entries will be reduced again due to the action of some amateurs who operated stations in a portion of the six metre band prohibited during television transmitting hours. Over many years, almost every conceivable rule has been tried in endeavours to raise the participation level, and yet this contest, which generates quite a lot of activity, still does not produce logs on the contest manager's desk. Like my predecessor, I strongly recommend that this contest be dropped in its present form and, in order to perpetuate the aims of Ross Hull, the contest be changed to a UHF only contest held over a whole summer season with scoring on a mileage/band system.

John Moyle Memorial Contest

This contest remains very popular and, with the running of the NZART Field Day Contest over the same weekend, has generated more activity. Some small points, not obvious when the rules were changed for the first of the contests, are being ironed out. The repeat contact has caused concern in the western parts of Australia with many amateurs expressing disappointment at not enjoying the almost continuous propagation paths to ZL by the eastern VK states.

Novice Contest

The Novice Contest does not generate the activity that it deserves and the number of novice licence holders that participate is disappointing, they being in the minority of logs received. To attract more entries from Novice stations, certificates are to be awarded to the leading Novice stations on a state by state basis in addition to the overall section winners.

I do not recommend that any changes be made to the rules of this contest in order to acknowledge the use of a portion of the 2 metre band by novice stations.

Remembrance Day Contest

This contest is very successful and continues to be the most popular Australian contest with entrants in all sections showing wide acceptance. The return of the "open" section has received support and favourable comments from those who entered this section. It is interesting to note that some 160 entries resulted from the VHF section of this contest and yet in the Ross Hull Contest the number of valid entries could be counted on two hands. The VHF section in the John Moyle Field Day Contest also generates a healthy number of VHF logs. One could be forgiven for thinking that the VHF only amateurs are just not interested in contest activities.

Recommendations

1.That the Ross Hull Memorial Contest be discontinued and replaced by a new UHF only contest, this new Ross Hull Contest to be run over a longer period during the summer season.

2.That the WIA approve the running of a VHF/UHF Field Day Contest to be held during the summer season.

3.Contest Disqualification Criteria: That the paragraph .."if a participant is disqualified under these aforementioned provisions that operator will be barred from entering the contest for that particular mode in the ensuing year".. be removed.

C.F. Beech, VK7BC
Federal Contest Manager.

Report of Federal Tape Co-ordinators for Year Ended 31st December 1988

During 1988 both Ron and I attempted to meet the aim of the Federal Tapes in providing news and comments from the Executive Office of the WIA for dissemination on weekly Divisional News broadcasts.

During the year we were able to change from 4 news segments on each tape, to 2 segments per tape, thereby giving some more immediacy to the news.

Constructive criticisms were received from several sources during the year, and I believe the improvement in the content of the tapes reflects these comments.

Also during 1988 the recording and duplication of the tapes changed from the home and equipment of Ron, to the location of the Executive Office using WIA equipment.

Different Divisions obviously have differing time requirements in their broadcasts. Some Divisions state they would like longer news segments, and others maintain that they have to edit the tapes because they are too long. On occasions the Federal Tape segment was not included in Divisional broadcasts without any explanation being given to the listeners.

Random monitoring of the Divisional news broadcasts by both Ron and I clearly showed a marked difference in quality of replay of the Federal Tape from Division to Division. The tapes are checked for consistent quality before being despatched from the Executive Office.

Preparation of the material for a 2 news segment tape averages 5 man-hours; the recording a total of another man-hour; and duplication of the tapes and despatch about another 2 man-hours.

Both Ron and I would like to thank those volunteer Divisional broadcast announc-

ers and engineers who helped us so ably in presenting news from the Executive Office of the WIA to the amateurs of Australia. The comprehensiveness of the Divisional news broadcasts gives Australian amateurs a news service which is unequalled in coverage anywhere else in the world.

If invited, both Ron and I are prepared to continue as the Federal Tape Co-ordinators for the next 12 months.

Bill Roper VK3ARZ, on behalf of the Federal Tape Co-ordinators Ron Fisher, VK3OM, and Bill Roper, VK3ARZ

Report by Education Co-ordinator for 1988

This has been a busy but frustrating year. In addition to the routine activities, some extra work has been generated by the extension of 2 metre FM privileges to Novices, and the Study Guide for AOCP/AOLCP is well in hand.

The main problem has been the continuing uncertainty about examination devolvement and the difficulty in getting information and projected dates from DOTC.

Recommendations

1. That standard examination procedures and protocol be established.
2. That all bodies intending to seek accreditation become part of a nationwide network to share the anticipated workload.
3. That the Federal body, with assistance, arrange to inspect the question banks before their release.
4. That the Executive prepare a bank of approved examination materials.
5. That a register be established of all bodies that gain accreditation and their proposed examination schedules.

My thanks go to all who have helped with education matters this year.

Brenda M. Edmonds VK3KT
Federal Education Co-ordinator.

FARWP II Report - 1988

As Chairman of FARWP II, I have to report that while little has been done in the name of this Working Party, a lot of effort has been put into presenting the first proposal for a future structure of the WIA, a copy of which has by now been circulated for discussion.

The year started very slowly with only three nominations for members to serve. Loads of information from Divisions have not been forthcoming, but I wish to thank John Aarsse and VK4 Division, and Neil Penfold for forwarding material from Peter Parker, VK6BWI.

Revision of the licensing structure has to await the outcome of an ITU review of the requirement for CW on HF. In August 1988 I forewarned of a meeting of the World Administrative Telephony & Telegraphy Conference (WATTC) held in Melbourne in November and December 1988. We appear to have received no public information as to whether CW on HF was an agenda item, and if so, what had happened.

Examination of the effect of the Australia/Japan agreement was delayed until receipt of a copy of the agreement in December 1988. This matter is pending.

I received no response or information from outside the ACT for examples of fee structures for licences being renewed for more than a year at a time. I finally made my own enquiries and found that while there is a readiness to accept a multiple of an annual drivers licence fee, there is no discount offered in the ACT or NSW. Accordingly, there is little to be gained in pressing for renewals in excess of one year unless DOTC is itself willing to accept such multiple fees.

However the major task facing all of us will be the introduction of a new structure. That will not be just a matter for FARWP II, but for the whole membership.

George Brzostowski,
VK1GB/VK4UZ
Chairman FARWP II

Report of Federal Awards Manager

October to December 1988

I took over from Ken VK5AKH in October 1988, so this report will be brief. Federal Executive has paid tribute to Ken's work and I thoroughly concur in those sentiments.

The WAVKCA Award continues to be the most popular WIA award, particularly with overseas amateurs. Some distance behind is the WIA DXCC Award, with most claimants being VKs.

My recent appointment to certify claims for the ARRL Worked All States Award for VK applicants is a new service to WIA members, some of whom have already made use of it. I expect Federal Council to approve the new WIA Antarctic Award and to announce details of it in the June issue of AR. Subject to Federal Council approval, I plan to introduce a new VK HF award based on grid square numbers during 1989.

Also underway is a survey of existing awards issued by VK clubs, zones and divisions. The last tally of these published was in the 1985-86 Call Book and I suspect that some may be defunct, while other awards have since come into being. Award managers around Australia may expect to hear from me soon.

I am recommending increases in award charges to Federal Council - the first for many years at a time when postal charges continually rise. At present overseas amateurs can obtain the WAVKCA for US$2, making it one of the lowest-priced amateur awards in the world.

Ken Gott VK3AJU
Federal Awards Manager

ANNUAL REPORT OF THE GENERAL MANAGER & SECRETARY FOR YEAR ENDING 31ST DECEMBER 1988

When I commenced as General Manager & Secretary early in May 1988 the Executive Office was in a mess with, amongst other things, inadequate equipment and resources, a deficient filing system, and correspondence and other items (dating back for up to 4 years) requiring attention.

The Executive Office now has the back log of work up–to–date (with some notable exceptions, due to lack of resources, such as the 4 year backlog of Contest Trophies, and a total absence of promotional material), a minimum level of office equipment installed, computerised accounting and database systems in place, and a filing system that works.

Some of the major achievements of the Executive Office during the year include:–

Development of the accounting and financial management systems on computer.

Setting up procedures and systems to enable professional handling of correspondence, meeting minutes, telephone calls and management reporting.

Sorting out and transferring of the Federal MagPubs operation to the VK2 Division.

Negotiation of an arrangement for overseas publications to be supplied at a substantial discount from an Australian book importer direct to Divisional Bookshops.

Development, implementation and processing of the Members Survey.

Publishing of the 1988 Call Book (the hundreds of hours of unnecessary work caused, and still being caused, by the inaccuracies and inadequacies of the DOTC callsign database must be beyond the comprehension of anybody not working in the Executive Office!).

Establishment of new production procedures to publish Amateur Radio magazine.

Substantial improvement in the processing of Customs Bylaw Certification with equipment importers.

Some indication of the workload of the Executive Office may be gleaned from the following calculated annual statistics:

Incoming mail items (including members subscriptions)	17,500
Outgoing mail items (including members subscriptions)	15,000
Incoming telephone calls	5,540
Outward telephone calls	3,020
Photocopies	56,300

Staffing of the Executive Office has varried during the year, and currently consists of:

Paid Employees

General Manager	Bill Roper 40 hrs pw
Assistant General Manager	Ross Burstal 40 hrs pw
Membership Secretary	Helen Wageningen 28 hrs pw
Accounts/Mail Clerk	June Fox 25 hrs pw
Secretary/Advertising	Ann McCurdy 20 hrs pw
Cromemco computer maintenance	Earl Russell 6 hrs pw

Volunteer Workers

General Manager	Bill Roper 40 hrs pw
Assistant General Manager	Ross Burstal 15 hrs pw
Librarian	Ron Fisher 6 hrs pw

Major problems in the Executive Office at present include:–

Insufficient human resources to handle the present work load on behalf of Divisions.

Inconsistency between Divisions in the way they expect the Executive Office to perform work on their behalf.

Inadequacy of the office itself (eg. poor lighting, inefficient airconditioning, lack of space).

Limitations of the Cromemco membership database computer and our dependence on one person for systems maintenance.

Unreliability of dealings with some of the volunteer WIA office bearers.

As from the conclusion of the 1989 Federal Convention, the Assistant General Manager and I will be reducing our volunteer labour from the present comined 55 hours per week to a maximum of 15 hours per week. This means that the Executive Office will cease to function at its present level of efficiency unless appropriate steps are taken by the Federal Council.

This Office exists mainly as a vehicle created by the Divisions to provide those member services, such as Amateur Radio magazine, the Call Book, and membership fee processing, which can be most cost efficiently carried out on behalf of the Divisions by a central body.

The Divisions must either:–

1. Provide funding to employ sufficient staff in the Executive Officer to hand the workload on their behalf; or

2. Resume at Divisional level many of the tasks presently being handled on their behalf by the Executive Office.

I have enjoyed the impossible challenges of this position over the past 11 months. I passionately believe in the hobby of amateur radio, and am irrevocably committed to the belief that a viable, professional WIA is essential to the future of our hobby in Australia.

I would like to thank the Executive Office staff, those Divisional office bearers with whom I am in regular contact, the many members from all Divisions who have given me encouragement, and particularly the Federal President, Peter Gamble, for the support given to me during my time in this position.

Bill Roper, VK3ARZ,
General Manager & Secretary

Report of Federal QSL Manager for Year Ending 31st December 1988

The Bureau operated during 1988, clearing the usual load of incoming VK9/VK0 cards. This report can only repeat previous year's reports, such as no help from DOTC, or the operators. Neither will tell me their home callsigns.

Nevertheless, we struggle on.

Incoming cards from world-wide sources indicate a pirate operator using VKOE. He has been worked by amateurs world-wide, except VK. DOTC have been informed, but I don't expect success in his apprehension. VK6CE was a pirate operator for over 15 years, and DOTC simply placed a "do not issue" flag in the Callsign Register. He eventually gave up his pirate operations and just disappeared. Might have obtained his callsign legally.

DOTC have advised that the figure and first following letter of callsign will no longer have any significance in relation to geographic areas. This could lead to some confusion in the future and make the Bureaux operations somewhat difficult.

Neil Penfold VK6NE
Federal QSL Bureau Manager

Report of Federal Coordinator International Travel Host Exchange for the Year Ending 31st December 1988

The ITHE is a voluntary scheme administered by the ARRL wherein interested radio amateurs are able to meet or host fellow operators from other countries. This is a free service. Several participants reported successful encounters "of the ITHE kind".

After a promising start in 1987, there has only been a slight increase in local membership (five participants) in the ITHE programme. The total Australian membership is about 25. Countries with larger amateur populations have fewer ITHE participants, but that is no cause for complacency. Continued publicity at suitable intervals should improve the situation. It may be worthwhile mentioning the scheme and perhaps a list of participants in the next Call Book.

Ash Nallawalla ZL4LM/VK3CIT
Federal ITHE Co-ordinator

Report of Intruder Watch Co-ordinator for 1988

1988 saw, after many years of complaints, the removal of Radio Beijing, Peoples' Republic of China, from the 40 metre Amateur band. Congratulations to all Intruder Watches around the world for this achievement.

Hopefully, 1989 may see a reduction in the number of Asian non-Amateur signals on the 28 MHz band, with the help of the listening amateur.

10,752 intrusions were reported for 1988, an increase of 5,267 on 1987, but these were mainly reports of the 28 MHz problem.

611 logs of complaints of intrusions were received for the year. VK4 continues to be the best supporter of the IW.

The Intruder Watch "Certificate of Merit" was awarded to:

Don Cross,	VK2EYI	Certificate No. 019
Jack Barnett,	VK4BXC	Certificate No. 020
Ken Hanby,	VK4IS	Certificate No. 021
Graham Rogers,	VK6RO	Certificate No. 022

Congratulations for a job well done.

The IW looks forward to more people registering complaints of intrusions into the Amateur bands in 1989, and we welcome the new Federal Co-ordinator, Bill Horner, VK4MWZ. Good luck, Bill. Please support the Intruder Watch and help to keep the incidence of intrusions into our bands to a minimum.

Bill Martin VK2COP
(Retiring) Intruder Watch
Co-Ordinator.

Annual Report on Electro Magnetic Compatibility for Year Ending 31st December 1988

11 monthly EMC Reports were published in Amateur Radio magazine during 1988, covering aabout 22.6 printed pages.

Considerable translating work was involved, dealing with West German publications. This work was considered to be necessary, because no other country seems to have a "Special Law" on "Amateur Radio" - pre-empting common law - spelling out clearly the duties and rights of the radio amateur. The DARC also has excellent, technically competent, support from professionally equipped members like DL1BU, the honorary technical officer. The importance is understood, if one reads the VE3BBM report on the Jack Ravenscroft case (copy submitted to VK3ABP on 10th January, 1989). The EMC problems and solutions are the same the world over, if treated logically.

Material for further EMC Reports has been submitted to the Editor of Amateur Radio for 1989.

Hans F. Ruckert VK2AOU
Federal EMC Co-ordinator

Long Time Between QSOs for Two Old Timers

Norman Hart VK4KO and Tadashi Okyuama JA1KFN made their first contact in 1934. But they had to wait 55 years for their next QSO.

It appeared to be a routine CW contact on 14 MHz on November 25, 1988, when Norman, aged 80, chatted with 85-year old Tadashi.

After the contact Tadashi checked his records and found Norman's old QSL card confirming their first QSO on November 10, 1934, using phone (AM) on the 7MHz band.

He sent Norman a photocopy of the QSL along with a Christmas Card. "I thought it was remarkable and he must have a very good record of his QSOs. I have written off to thank him," Norman said.

The log of VK4KO has some 68,000 contacts since Norman obtained his licence in 1931.

Norman and Tadashi were young men setting out on a life-time involvement in the hobby of amateur radio when they first met on air.

Now both old timers they're able to renew that friendship which is only possible through the world's best hobby.

Norman Hart HK4KO reminisces over a 1934 contact he had with Tadashi Okyuama JA1KFN. (Picture courtesy Queensland Times).

AGENDA ITEMS FOR 1989 FEDERAL CONVENTION

AGENDA No. 89.09.01

Proposed by FTAC

MOTION THAT .....

The Federal Council adopt the revised Australian Band Plans as published in January 1989 issue of Amateur Radio magazine on pages 22,23, and 24.

PROPOSER'S COMMENTS.....

Following the IARU Region 3 conference in Seoul during October 1988, where the Region's band plans were revised and adopted, FTAC revised all Australian band plans.

The Region 3 band plans, together with the revised proposed Australian band plans, were published in January 1989 issue of Amateur Radio magazine. The current Australian band plans (arising from the IARU Region 3 Conference in Auckland during 1985) were published in the data section of February 1989 issue of Amateur Radio Magazine.

The diagram on page 22 of January, 1989 Amateur Radio Magazine does not clearly delineate the proposed and current 28MHz beacon bands.

The current beacon band 28.20 to 28.30 MHz changes on 1st January, 1990 to 28.19 to 28.20 MHz and becomes a time multiplexed frequency shared service. One frequency will be allocated for a world wide service like the existing 14.100 MHz North California DX Foundation (NCDXF) beacons. Australia should anticipate one time slot on this frequency. The remaining frequencies will be allocated on a continental basis. Again, Australia should anticipate one Australasian (including New Zealand?) frequency to be time shared by up to ten beacons around our area. The NCDXF beacon controllers sequence beacons for one minute transmitting time intervals throughout a ten minute cycle. A further sophistication steps the radiated power in 10dB steps during each radiating minute.

AGENDA No. 89.09.02

Proposed by Executive

MOTION THAT.....

The Federal Council:–

ENDORSE the spectrum allocation proposals adopted by IARU Region 3 at Seoul 1988, to which the WIA contributed significantly through its detailed guidance arising from the 1988 Federal Convention.

ENDORSE the proposal that the WIA follow IARU Region 3 guidance in its approach to the national authorities for less onerous third party traffic operating conditions.

ENDORSE WIA involvement in the Australian Preparatory Group considerations for ITU Conferences and Meetings through the accreditation of one or more competent amateurs to that body, noting the associated internal travel expenses resulting during the period up to WARC 92.

DIRECT/ENCOURAGE amateur members of the APG to influence that body's support of amateur proposals advanced by other administrations.

ENDORSE the WIA proposal to seek inclusion of one or more competent amateur members on the Australian delegation to ITU Conferences or Meetings at which amateur matters are included on their agendas, NOTING this will be confined to WARC 92 in the first instance and that initial negotiations will aim to seek government funding of all or part of the delegates travel expenses.

ENDORSE the creation of an amateur radio movement WARC 92 fund, managed by the WIA, and tasked to generate $15,000 by the end of 1992.

ENDORSE the concept of cultivating the awareness of key persons involved in ITU affairs and NOTE that briefings must be co-ordinated and given in a professional manner.

DIRECT those WIA members involved in APG representation to keep the Secretary of Region 3 fully informed of national preparations,

NOTING any requirements to maintain such confidentialities as APG involvement incurs.

ENDORSE the continued involvement of WIA members in national CCIR preparations, NOTING this may place a significant workload upon a few volunteers.

PROPOSER'S COMMENTS.....

The Federal Council, at the 1988 Federal Convention, adopted guidelines on planning for WARC 92. These were represented as the WIA position at the IARU Region 3 Conference in Seoul during October 1988. Following that conference the WIA's IARU Liaison Officers produced the paper "Planning for WARC 1992". That paper was published in March 1989 issue of Amateur Radio magazine, to which reference should be made for the complete text.

AGENDA No. 89.09.03

Proposed by FTAC

MOTION THAT.....

The Federal Council:-

ENDORSE the changes made to the Australian band plans to update them and to accommodate the increasing demands for data mode spectrum.

ENDORSE the proposal that the WIA follow IARU Region 3 guidance in its approach to the national authorities for less onerous third party traffic operating conditions.

NOTE the areas of technology identified by IARU Region 3 for consideration in the development of packet and ENCOURAGE their pursuit by Australian enthusiasts.

ENDORSE the concept of one general purpose VHF/UHF bulletin board together with one or more special purpose limited topic boards in major cities.

ENDORSE the concept of limiting the number of HF bulletin boards to the minimum number necessary, taking as guidance one in each geographically smaller state and two in larger states.

ENDORSE the concept of a SYSOPS Code of Ethics and ENCOURAGE the active HF SYSOPS to complete that Code.

NOTE the desirability of retaining simple access to packet networks using unsophisticated stations with interfacing as necessary to permit use of most network facilities, and OBSERVE that parallel development can proceed and access to more facilities and faster systems operations will be an inducement for newcomers to upgrade their stations.

PROPOSER'S COMMENTS.....

In responding to directions from the 1987 and 1988 Federal Conventions, and taking note of the IARU Region 3 Conference in Seoul during October 1988, FTAC has produced a "WIA 1989 Packet Radio Position Paper". That paper was published in March 1989 issue of Amateur Radio magazine, to which reference should be made for the complete text.

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AGENDA No. 89.09.04

Proposed by Executive

MOTION THAT.....

The Federal Council:–

CONFIRMS ITU Day, 17th May, as the annual special activity day for Australian radio amateurs;

ENCOURAGES Australian radio amateurs to make a particular effort to be active on that day; and

ENCOURAGES official Divisional stations to make use of the special ITU suffix which is available for their use annually on that day.

PROPOSER'S COMMENTS.....

The WIA, at the IARU Region 3 Conference in Seoul during October, 1988, proposed the following:

"ITU Day, 17th May each year, also be re-designated World Radio Amateurs Day – ITU Day, with all IARU member societies making an effort to increase amateur radio activity through use of special event stations, callsigns, QSL's and awards as appropriate."

Conference considerations showed some nations used World Radio Amateurs Day (18th April) whilst others were not aware of either! The motion was withdrawn as it appeared to be a decision of free national choice. Consequently, this proposal is made for the WIA. In support of the proposal, we have continuing use of the ITU suffix annually by official Divisional stations, and the alternative date (18th April) clashes with a world wide magazine sponsored contest.

AGENDA No. 89.09.05

Proposed by FTAC

MOTION THAT.....

1. The Australian 28 MHz beacons change frequency to comply with the recently adopted IARU Region 3 band plan and their mode of operation change to single frequency time sharing with stepped power output levels.

2. FTAC is directed to negotiate frequency allocations with the International Beacon Co-ordinator and publicise details of control circuits.

3. The changeover is to commence from 1st January, 1990, and be completed within twelve months.

PROPOSER'S COMMENTS.....

The WIA Beacons paper, adopted by the 1987 Federal Convention, proposes a 28 MHz beacon scheme based upon the IARU proposals adopted by Region 3 at Auckland, 1985, and by the other regions in following years. The IARU Region 3 band plan, revised and adopted at Seoul 1988, makes provision for a series of time sharing common frequency beacons between 28.19 and 28.20 MHz replacing the existing segment 28.2 to 28.3 MHz from 1st January, 1990. A worldwide frequency and several separate continental frequencies are proposed. Australia will need to co-ordinate frequencies with the International Beacon Co-ordinator and advise DOTC of his recommendations. As each beacon will require an accurate clock controller to control the times of its transmission and stepped emitted power levels, the need arises to publicise the design of such a unit. These actions are obviously ones for FTAC.

AGENDA No. 89.09.06

Proposed by VK2

MOTION THAT .....

The 2M beacon sub-band be moved from 144.4 – 144.6 MHz to 147.8 — 148.0 MHz.

PROPOSER'S COMMENTS.....

Repeaters operating with inputs at the top of the 2M band are suffering heavy interference from paging transmitters. This interference is likely to worsen as further paging transmitters are installed.

As beacons are "transmit only" devices, they will not suffer from interference from pagers and their re-location to the top of the 2M band would provide a guard band between repeater inputs and the pagers.

The band segment 144.4 to 144.6 MHz could form part of a new repeater sub-band.

AGENDA No. 89.09.07

Proposed by VK2

MOTION THAT.....

A new repeater sub-band be created below 145.7 MHz.

PROPOSER'S COMMENTS.....

The existing 2M bandplan provides 31 channels between 146 MHz and 147.975 MHz. This is insufficient for high-density areas. In addition, the widespread introduction of paging transmitters in the 148–150 MHz band is resulting in 147 MHz frequencies not being useable in some areas.

As paging transmitters become more widespread, channels 7025 through 7375 will become less useable. This will increase the pressure on channels 6625 through 7000.

The band segment below 145.7 MHz appears to be less used than the 146–148 MHz segment and it is possible that a new repeater sub-band could be created, without significantly affecting existing simplex usage.

AGENDA No. 89.09.08

Proposed by Executive

The Wireless Institute of Australia, as part of a process to modernise its image, use the acronym "WIA" in lieu of "Wireless Institute of Australia" and "Institute" in normal, everyday reference to the organisation.

PROPOSER'S COMMENTS

Currently a number of forms of abbreviation have gained common usage when referring to the Wireless Institute of Australia. As part of a modernisation process it is proposed that, when new material is prepared (eg. letterheads, publications, etc.), the preferred term of reference be given prominence.

AGENDA No. 89.09.09

Proposed by Executive

MOTION THAT.....

The Federal Council agrees that the 80th Anniversary of the WIA be celebrated in a like manner to, but on a lesser scale than the 75th Anniversary, and directs that a committee be formed to prepare recommendations and a budget for approval by the Executive, and to implement them as appropriate.

PROPOSER'S COMMENTS.....

As part of the WIA's activities in striving for a higher profile, seeking cohesion and recruiting members, and in accordance with a proposal received from Jim Linton, VK3PC, it is proposed that the WIA should celebrate its 80th anniversary. This would not be on the scale of the 75th birthday celebrations, but would draw on some of the events and experiences of that activity.

The 75th birthday celebrations achieved a number of the above objectives at that time and it is suggested that a similar event, especially during a time of increasing sunspot activity and the lead up to the next WARC, would also achieve these objectives.

The following events are suggested as possibilities:–

1. Logo competition: members submit their ideas on a log for WIA 80.
2. Award: an award similar to the WIA 75 award with members exchanging their WIA membership numbers during contacts. The details would be handled by the WIA Awards Manager.
3. Membership certificates: special membership certificates with the WIA 80 logo be prepared for issue to members joining during the celebrations.
4. Call Book: a special feature to be made of the 1990 Call Book.
5. Membership drive: a recruiting drive be introduced with appropriate recognition of those members and clubs who introduce new members. Further, every 80th new member during the year receive their second year's membership free.
6. Special event: an event based on working 80 countries on HF. Various categories such as – Novices licensed less than three years; Novices open class; Full Call licencee who has not already attained DXCC; and a Full Call open class – would be a feature of this event.
7. Postcode competition: a national postcode competition with the requirement to work 80 postcodes.
8. WARC bands: a special competition to contact 80 stations on the 10 MHz and 24 MHz bands.

All of the above would need to be accompanied by appropriate media publicity about the WIA and amateur radio.

AGENDA No. 89.09.10

Proposed by VK1

MOTION THAT.....

The WIA resolve to:

Apply commercial principles and engineering practices in the planning, siting

and construction of its real time frequency shift repeaters;

Determine recommended specifications/ criteria for the planning and siting of repeaters providing coverage of local and regional service areas, (see attached draft); and

Obtain an assurance from the Department of Transport and Communications that:

The checks and tests applied to all amateur assignments be the same as those applied to a commercial assignment including the notification of potential intermodulation interference to or from other services;

Any amateur repeater given a "clean" assignment and configured in accord with the prevailing standards for the land mobile radio service be accorded the same level of protection from interference as would any other primary commercial service; and

Where necessary, for the purpose of commercial site management and planning, an amateur repeater may be requested to change its frequency subject to there being a suitable alternative frequency available and the cost of the change being equitably shared by the parties involved.

PROPOSER'S COMMENTS.....

Many amateur repeaters are for ease of site service engineering being co-sited with commercial services, some of which occupy adjacent frequencies. In these situations the amateur repeaters are to all intents and purposes just one more service, subject to the same constraints and problems as any other co-sited service.

With the widespread introduction of paging and land mobile services, many amateur repeaters have the potential to, or already, suffer interference in the form of adjacent channel and image interference, and/or unwanted, spurious and intermodulation products on the receive frequency. These sources of interference can be resolved, but the source mechanism determines the solution and could involve reassignment.

Amateur Repeaters have to date tended to be planned in accord with the amateur band plan without reference to adjacent services planned for and operating in adjoining bandspace. This absence of coordinated planning is starting to impact on amateur repeater services by limiting the number of "clean" assignments that can be made, creating problems of interference to existing amateur repeaters, and will culminate in the amateur service not being protected against interference from other services.

The Amateur Repeater Service is no different from the commercial land mobile service in terms of the technical constraints affecting its operation. The spectrum is a finite resource and as the demand for services increases, planning co-sited services becomes increasingly difficult. The Amateur Repeater Service must recognise the rightful presence of other commercial services and plan accordingly if it wishes to continue to receive the same levels of protection accorded to those services.

These comments have specifically addressed the problems associated with co-siting services. The benefits of minimising interference to and from other services cannot be stressed too strongly and all repeaters, regardless of their siting, should be designed and site engineered to "commercial" standards. The Amateur Repeater Service will receive the recognition and respect its performance commands: "professional" respect will accrue from a "professional" approach, amateur results are not competitive in the fierce realism of the commercial environment.

The impact of this on the repeater service would be:

Defining the service area of the repeater in terms of regional or local coverage and determining its technical operating conditions (including the site) accordingly; Accepting that repeaters co-sited with other frequency adjacent commercial services be treated as a "commercial" installation and configured as "local" service;

Accepting that repeaters which do not conform with their technical operating conditions and/or are not constructed to a commercial standard may have to be upgraded to the satisfaction of the investigating officer before action is taken to resolve an interference problem;

Accepting that some existing repeaters will have to be reassigned to avoid interference (either to or from other services) and enable more spectrum efficient use of the site;

Increasing application of Convention Resolution 87.12.01 which recognised the possibility of the Amateur Service in certain circumstances having to use low side receive for 2 metre repeaters above 147 MHz; and

Establishing the quality and integrity of the planning and operation of the Amateur Repeater Service and assuring the equity of interference resolution.

RECOMMENDED SPECIFICATIONS

1. Local Service:
   Receive Sensitivity: -116 dBm (.35 uV)
   Transmit Power: +40 dBm (10 W)
   Measured at the antenna port of the diplexer.

2. Regional Service:
   Receive Sensitivity: -120 dBm (.22 uV)
   Transmit Power: +43 dBm (20 W)
   Measured at the antenna port of the diplexer.

3. Recognised Service Area:
   Determined initially by the geographical area to be served but not to exceed the -110 dBm contour.

4. Frequency Re-use Radius:
   160 Km for local frequencies;
   200 Km for regional frequencies; and
   350 Km or 175 dB path loss for inverted repeater frequency.

5. Interference Sources:
   Intermod Products: +/- 20 MHz of Rx @ 30 kHz bandwidth;
   Harmonic Products: All Tx frequencies to Rx frequency; and
   Adjacent Services: >150 kHz (depending on adjacent Tx specs).

6. Technical Standards:
   Receiver Performance: Co-channel rejection ratio > 12 dB, all other spurious response rejection ratio > 70 dB, and intermodulation response > -35 dBm, as measured at the input to the receiver;

   Transmitter Performance: All spurious emissions > - 36 dBm measured at the output of the transmitter, and the intermodulation attenuation to be > 40 dB for any intermodulation component;
   (Refer MPT 1326 for standards and measurement methods)
   Antenna: Vertical Polarisation; Radiation Pattern and gain to suit defined service area.

AGENDA No. 89.10.01

Proposed by VK4

MOTION THAT.....

A grade of WIA membership, allowing for non-receipt of AMATEUR RADIO magazine, be investigated and that before any possible institution thereof, the issue is put before the membership of the WIA for their approval.

PROPOSER'S COMMENTS.....

It has become important that all facets of this situation be examined thoroughly. A significant number of enquiries for this option have been received in the past.

AGENDA No. 89.10.02

Proposed by Executive

MOTION THAT.....

The WIA investigate the feasibility of introducing a low cost grade of full privilege membership to those members who have supported the WIA with their membership for 25 years or more, and who are now in receipt of a full Social Security pension.

PROPOSER'S COMMENTS:

Almost without exception, the inquiries received at the Executive Office regarding a grade of membership without Amateur Radio magazine are made by pensioners who have supported the WIA for a long period of time, are now experiencing some financial difficulties, but want to continue to support the WIA in its fight for the future of the hobby of amateur radio.

The WIA should support these members, who have themselves supported the WIA for so many years, by offering continued full membership, including Amateur Radio magazine, at a substantially reduced fee.

AGENDA No. 89.10.03

Proposed by Executive

MOTION THAT.....

The Divisions reach agreement on uniform membership details and procedures, specifically in relation to the following items:-

1. Grades of membership.
2. Divisional component of annual membership fees.
3. Qualification for pension grade membership.
4. Qualification for student grade embership.
5. Qualification for Affiliated Club membership.
6. Response to membership enquiries received at the Executive Office.
7. Provision of new members details and fees to Executive Office.
8. Receipt of incorrect fees at Executive Office.
9. Response to new members by way of welcoming letter, membership certificate, advice of Divisional information, first copy of Amateur Radio magazine.
10. Member transfer to another Division.
11. Maximum delay allowable in renewing membership before member must reapply for a new membership.
12. Universal membership application form.

PROPOSER'S COMMENTS.....

Presently there is considerable lack of uniformity between Divisions in the grades of membership, the amount of the fees, and the procedures used. Not only does the credibility of the WIA suffer from such disparity between the seven Divisions, but there is considerable confusion throughout the WIA as to the proper procedures.

The efficiency of the Executive Officer is severely disadvantaged when forced to handle matters on behalf of the Divisions differently for each Division. This enforced inefficiency tends to nullify the advantages of a central processing operation for the Divisions.

AGENDA No. 89.10.04

Proposed by Executive

MOTION THAT.....

The WIA pay a commission equal to 10% of the advertising rate to financial members of the WIA who obtain new advertising, other than through advertising agencies, for Amateur Radio magazine; and that this commission also be payable if the new advertising is from the member of his business.

PROPOSER'S COMMENTS.....

Advertising in Amateur Radio is obtained almost entirely through the efforts of the Executive Office, with no help from the Divisions.

This incentive may motivate members, or even Divisions, to help in obtaining much needed additional advertising for Amateur Radio magazine.

AGENDA No. 89.10.05

Proposed by Executive

MOTION THAT.....

The WIA immediately introduce a financial incentive scheme whereby all radio clubs, affiliated with the WIA or not, will receive a commission from the WIA for each club member who joins the WIA as a new member.

PROPOSER'S COMMENTS.....

The majority of the much discussed recruiting schemes at the 1988 Federal Convention have never been put into effect, yet another consequence of the dearth of competent volunteers.

Radio clubs are the grass roots of amateur radio in Australia. Like all clubs, they need funds. This incentive scheme will mutually benefit the clubs and the WIA.

AGENDA No. 89.10.06

Proposed by Executive

MOTION THAT.....

The WIA immediately introduce a financial incentive scheme whereby all existing members of the WIA will receive a commission from the WIA for each new member they sign up.

PROPOSER'S COMMENTS.....

The majority of the much discussed recruiting schemes at the 1988 Federal Convention have never been put into effect, yet another consequence of the dearth of competent volunteers.

In our present materialistic society, cash incentives could be the only way to motivate members into successful recruitment activity.

AGENDA No. 89.10.07

Proposed by Executive

MOTION THAT.....

The Federal Council review the operation of MagPubs.

PROPOSER'S COMMENTS.....

The aim of MagPubs is to provide a service to members by ensuring:

That overseas books are readily available to members at a discount price.

That suitable WIA log books are available; and

That "specials" that might otherwise not get printed are available.

Additionally, it has been the practice to stock other items including car stickers, badges, windcheaters, ties etc.

A detailed "Report and Recommendations for the Revised Operation of MagPubs" was prepared by the then Acting Treasurer and presented to the 1988 Federal Convention. In an effort to devolve some of the workload of the Executive Office, the operation of MagPubs was devolved to the VK2 Division on 1st August 1988.

The Executive believes that it is appropriate to again review the operation of MagPubs.

89.10.08

Moved by Executive

Motion on WIA Management Changes

This Council;

NOTING the need to embrace modern service industry management practices in the WIA; and

NOTING the need to raise Divisional awareness and involvement in national matters; and

NOTING Council appointed for the first time a number of non-Melbourne based Executive members in 1988; and

NOTING Council did not provide adequate resources to permit those non-Melbourne Executive members to participate fully in WIA management; and

NOTING the employment of paid Officers has relieved Executive of much routine administrative action; and

NOTING the assigning of portfolios has achieved a fair degree of devolution of non or less immediate activities; and

NOTING the several levels of WIA management and their response times, viz;

.routine matters and members services, by the Executive Office and paid Officers on a daily basis;

- urgent reactions, decisions and negotiations by Melbourne based Executive on a daily to weekly basis;
- broader and more slow moving issues by full Executive on a quarterly basis;
- projects, special tasks and delegated routine operations by volunteer officers of the Executive on an annual basis;
- development and review of policy by the Federal Council annually at Federal Conventions; but,

NOTING the arrangements above only go part way towards achieving the dynamic form of management needed in these present times.

This Council:

RESOLVES to continue the appointment of a number of non-Melbourne based Executive members; and

RESOLVES to continue the management style achieved through use of portfolios for Executive members; and

RESOLVES to modify the management style to permit the WIA to respond more rapidly and to be pro-active; and,

RESOLVES to appoint a management oriented Councillor from each division to Executive in order to extend awareness of national issues into the Divisions and facilitate feedback of members opinions; and,

RESOLVES to hold quarterly full Executive meetings, designated Conventions under the Articles of Association; and,

RESOLVES to arrange activities into four management response groupings as follows;

- routine services by Executive Office staff on a daily basis;
- management responses and directions by the President's Advisory Group of Executive on a daily to weekly basis;
- policy development and review, together with review of major issues, on a quarterly basis by the full Executive meeting in Convention;
- projects, special tasks and routine operations devolved to volunteer Officers of Executive and reviewed annually or as required; and,

SETS UP the President's Advisory Group comprising President, Editor and Treasurer from Melbourne based members of Executive who are not Federal Councillors; augmented as necessary by co-opting Officers of Executive, both paid and volunteer, whose skills contribute to the matters at hand.

DIRECTS the President's Advisory Group to devise a program of work and Convention agenda which establishes this management style and eliminates unnecessary involvement in matters of detail by all concerned.

Proposers Comments:

For the past two conventions the Council has wrestled with the future structure of the WIA. Because of the significant implications of any abrupt change in structure, the matter has been approached in a co-ordinated but incremental way.

Indications from the 1988 Convention led the Executive to conduct a Corporate Management Planning session. This intensive one day meeting has the guiding support from two marketing business planners. The outcome of this activity was the development of a mission statement for the WIA and the identification of some thirty key issues. These were assessed for their "Urgency" and their "Impact". This led to each issue being ascribed a priority.

A number of these key issues related to communication right across the WIA and the complicated existing management procedures, which lead to delays in the decision making process.

An examination of the issues identified will show that a number have been ana-

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CONVENTION BUSINESS

lysed and solutions proposed in this motion. Further supporting detail can be found in the article "Why Corporate Plan" in the April issue of "Amateur Radio".

AGENDA No. 89.13.01

Proposed by Executive

MOTION THAT.....

The WIA introduce an Antarctic Award and that the Federal Awards Manager be requested to prepare a detailed set of rules and make arrangements for the preparation of a suitable certificate.

PROPOSER'S COMMENTS.....

This award would be established to encourage amateurs worldwide to contact the increasing number of amateurs located in the Antarctic continent. It would also commemorate the 75th anniversary of the first two-way radio contact between Antarctica and the rest of the world.

The first contact was on 21st February, 1913, when an exploration team lead by Australian geologist Douglas Mawson exchanged messages with a station set up on Macquarie Island some two years earlier. Two days later, on 23rd February, messages were sent from Mawson's base at Commonwealth Bay to the Governor-General of Australia via the Macquarie Island relay station.

Consequently, it is proposed that only QSO's, made after 0001 UTC, 23rd February, 1988, count towards this award. Further, Antarctica would be defined as the land mass (including islands) and permanent ice-shelf below latitude 60 degrees south. To claim the award, it is proposed that amateurs must have confirmed contacts with the ten amateur stations conducting valid operations in Antarctica and that this should include stations with prefixes from at least six different authorities. The general rules for WIA awards would apply.

It is appropriate that Australia sponsor this award because of the long association that Australia has had with the Antarctic area.

Richard Butler to Retire

A key figure in the International Telecommunications Union, Richard Butler, has announced his decision to step down as ITU Secretary-General.

Mr Butler has held that position since 1982, and was the Deputy Secretary-General 1968-82.

Personal reasons, and particularly the fact of turning 63, had led to the conclusion that I would not seek re-election, he said in a statement issued in Geneva.

His distinguished career began with Australia's PMG (now Telecom) in the 1950s, and he held various executive positions before moving to the ITU.

Why Corporate Plan?

by Ron Henderson, VK1RH
with encouragement from
Peter Gamble VK3YRP

Why corporate plan you might well ask; after all the WIA is not a corporation and we know where we are going. Or do we?

Do we really want more of the same or are there changes you would like to see take place in the WIA? Can we even achieve more of the same? We would suggest no; for example only four Melbourne area amateurs were available to serve on the Executive this year, four out of ten and not one of them was a new face. Volunteer effort is becoming harder to find, employing staff places increased demands upon subscription rates and all the while we struggle along trying to do the same as we have done for years gone by.

Are we doing the right things? We are not sure, so we have to find out, hence the questionaire in Amateur Radio magazine last October. But printing a questionnaire is not enough, someone (a volunteer or the paid officers?) has to analyse the results, taking up more valuable time which some say might have been more gainfully used tackling today's problems. Remind you of scrambling up a slippery incline in a plastic bag? Or just keeping up with the daily cost of existing? What is the solution? Well your Executive believed it was necessary to take a couple of steps back from the coal face and indulge in a little critical introspection. We did just that last mid-winter, in a venue remote from the Federal Office where the phone, photocopier and files could not disturb us. We did it whilst you were enjoying a close fought football match on TV, for you would not have been at the ground as the weather was foul.

We were aided and abetted by a couple of bright young marketing gentlemen from a service industry which is going through a similar exercise to what we were aiming to achieve. (Incidentally they gave their time for the price of a good dinner!) We gave the matter one full day, just half of what it deserved; why you ask? Well the second day we had to get back to the Office to hold an all day Executive meeting and cast a little water on the bush fires burning there. So what did we achieve? And was it really worth it? We think yes, but as the exercise is only part way through we do not have a lot we can show you at this stage.

We did develop a WIA Mission Statement, as the President wrote in a recent editorial. It's short and succinct and does not take a couple of pages to set out as our Objectives do in the Articles of Association.

Here's our Mission Statement:

"To promote and advance amateur radio locally, nationally and internationally in a way which:

Meets member and community needs:

Encourages the maintenance of standards; and

Positions this organisation as the representative voice of amateur radio enthusiasts in Australia."

Before we go any further let's look at that Statement and make a few points. A recent letter to the editor of AR went to some length to define the amateur service. We ask, are we representing all amateurs or only members? We sincerely think the former and would, in an ideal world like to believe that every amateur, licensed or just a radio enthusiast, belongs to our organisation. Of course some would want more from us than just the services we provide for the greater body, and no doubt they would be willing to pay for those extra services, perhaps on a graded scale according to what they require and what it costs us to provide it. Shades of "user pays" again you might comment, but that's life according to the government!

The Executive "think tank" on that wet winter Saturday went on to identify key issues which impinge upon the functioning of the WIA. These were posted on a blackboard, debated, grouped up, rephrased as Objectives and agreed as a fair description of our problems, as perceived by the gathering. They numbered 27 in all. Next came the hard part, to determine the relative importance of these Objectives. A three by three matrix was constructed on the board (shades of noughts and crosses) with "Impact" along one axis and "Urgency" down the other. The "think tank" then fitted every Objective into its appropriate square, that is:

"high", "medium" or "low" Impact, and

"high", "medium" or "low" priority.

At this stage it is obvious we have to do something fairly quickly about the "High, High" issues whilst the "Low, Low" ones (if any?) can roll off the board!

In an article like this which aims to explain our corporate planning in simple, easily comprehended terms, it would be folly to give you all the entries in the matrix. However it is important you see the five "High, High" Objectives. They are:

1 .Retaining members,
2. Prepare a recruitment policy,
3. Financial viability of WIA (members are conditioned to cheaper approach to prices),
4. Publicise WIA services to members and prospective members,
5. Process of communication within the WIA (lateral communication nonexistent - vertical communication largely restricted to "top down").

Our next actions were to analyse these Objectives further, break them down into component Activities, decide who is responsible for actioning them, what time scales apply and what resources are needed.

Objective 4 above is a good illustrative example and in brief note form appears as follows:

Objective No. 4

Key Area. Publicity (of services)

Objective. Publicise WIA services to members and prospective members.

Priority. High (High impact)

Objective Responsibility. FE and Divisional Councils.

Objective Date: (Desirably 1 Nov) in reality for 1989 renewal notice postings.

Activity 1. Define WIA services and split into Federal and Divisional components.

Responsibility. FE and Divisions

Date. 1 Nov 88

Resources Required. Divisional and FE think tanks (much exists already).

Activity 2. Present services listings in convincing formats - brochures

Responsibility. FE/PR helpers.

Date. 1 Dec 88

Resources Required. FE fund printing and recoup from divisions as supplied to them.

Comments. Ties in with Objectives 2 and 3. Could be distributed with renewals, casual enquiries and in PR ads in magazines (ARA, ETI, EA).

So how is progress on this objective? Well the AR questionnaire contained a full listing of WIA services as we saw them and you were asked to comment on them. That list came from an earlier one discussed informally and refined over the last two Federal Conventions. Who said Conventions achieved nothing?

The need for PR brochures was agreed earlier in the year, for our stockpile was dwindling and there was an urgent need to update our brochures with several differing versions targeted at differing groups of potential members. We have received considerable assistance from VK4 in preparing those brochures, a desk top publishing system certainly is an advantage and they will be in use early in 1989. One matter allied to the PR brochures has

perplexed us, for it was our intention to produce "universal" brochures that could be used Australia wide. Some divisions saw no need to advise their potential needs, and this makes us wonder do they have a source of better brochures and are not letting on, or do they consider it too costly to use these professionally designed items, preferring cheaper (?) photocopies or don't they respond to how to join enquiries?

Incidentally, although not yet analysed in depth, our survey has suggested new fields in which to provide an awareness of amateur radio and you will see our advertisements appearing in a wider range of electronics hobbies magazines in the future.

We trust this brief insight into the WIA's Corporate Planning has aroused your interest and you will respond by becoming an ambassador and recruiter for your interest. One thing we must emphasise, like another organisation, "Unity is Strength", for we cannot approach our future in a fragmented fashion. What is good for your radio club is also good for your division and the WIA as a whole. Will you be an active ambassador?

Third Party Traffic for New Zealand

Jim Linton VK3PC
4 Ansett Crescent
Forest Hill 3131

New Zealand's 6,500 radio amateurs will in the future be able to handle third party traffic (TPT).

This will come about because of a general deregulation of telecommunications in New Zealand.

The Ministry of Commerce, Radio Frequency Service, General Manager, Communications Division, Dave Jenner said with deregulation there would be no regulation to stop TPT.

Mr. Jenner said when New Zealand Telecom loses its monopoly on communications there will be no basis for prohibiting radio amateurs from passing messages for others.

Of course the international regulations covering the Amateur Radio Service will still ban the handling of traffic for commercial gain.

With the absence of any bilateral arrangements ZL radio amateurs can't pass TPT to any other country.

The Wireless Institute of Australia in 1985 asked the Australian Department of Transport and Communications to seek what is known as an International Telecommunications Union 2734 Radio Regulation Arrangement.

There was no response from the NZ administration but the matter is likely to be pursued again.

Mr Jenner told Amateur Radio magazine that radio amateurs in New Zealand had not seemed concerned about being unable to pass third party traffic.

There had been a report in a New Zealand newspaper that radio amateurs would be allowed to handle non-commercial messages.

The New Zealand Amateur Radio Transmitters (NZART) Administration Liaison Officer, Fred Johnson ZL2AMJ told AR magazine: "Don't believe anything you have read, nothing has happened yet, there are still negotiations continuing".

A group calling itself the New Zealand Traffic Net issued a statement to AR magazine which said: "The New Zealand Radio Frequency Service has advised the NZART and, separately, Rob ZL3TJP, Bob ZL2AMI, and a number of others that they now intend to fully deregulate third party traffic in New Zealand".

Fred Johnson denied that anything had been finalised and could not agree that there would definitely be TPT generally available to all radio amateurs in the near future.

However the NZ Traffic Net said the new privileges are expected to be available after April 28, 1989.

Mr. Jenner said he had no knowledge of TPT being available on that date, or any specific date being mentioned.

He said the issue of deregulation of telecommunications had been delayed in Parliament and might not be finalised until June or July.

But the NZ Traffic Net maintains it has been assured the Radio Frequency Service will make TPT available through regulation in the NZ Government Gazette.

The net has announced it will be handling voice TPT via 3.570 MHz most nights of the week after TPT is available.

The net is affiliated with the International Amateur Radio Network based in Maine, USA, which has played a key role in providing emergency communications after international disasters.

In anticipation of a TPT go ahead, a group of radio amateurs has approached NZ Telecom to see if the WIA line interface unit (LIU) can be adapted for approved use in New Zealand.

AUSSAT

Australia's National Satellite System

Mr Graham Gosewinckel, Managing Director of Aussat

Aussat supports JOTA

Australia's national satellite system owner and operator Aussat, provided satellite links for the 31st Jamboree Of the Air and is likely to be a permanent part of this annual event.

The network set up by Aussat over the weekend of October 15 & 16, 1988, was between Sydney, Perth, Melbourne, Brisbane, Canberra and Darwin.

It was the second consecutive year Aussat had supplied use of its system, with the 1987 Link being only between Sydney and Perth.

Aussat's managing director, Graham Gosewinckel said the company was delighted to be able to support the event again.

"We view this type of sponsorship as an important community service which enables us to participate in an area of activity that is closely related with our own business," Mr Gosewinckel said.

"It provides an ideal opportunity to demonstrate the flexibility of satellite communications to a wide ranging group of enthusiasts involved from many walks of life in amateur radio in Australia.

"On the two occasions Aussat has been involved with JOTA the service provided has been enthusiastically received and we have received very positive feedback from the participants.

"From our point of view, it is a very worthwhile exercise, and I am hopeful, should capacity and equipment be available this year that we can again be a key player in JOTA," he said.

The Links and locations were decided by the availability of ground equipment and satellite capacity.

They were carried on satellite A1 transponder 10 which has an uplink centre frequency of 14.121GHz and a downlink centre frequency of 12.373GHZ.

At each capital city local radio amateurs provided transceivers to interface into the satellite system.

These were installed at the Major City Earth Stations and accessed either directly on simplex frequencies or through local two metre repeaters. These transceivers were then interfaced to the various satellite circuits.

Equipment

Interface

The interface between the amateur transceivers and the satellite ground equipment consisted of the following:

- Audio into the ground equipment
- audio out of the ground equipment,
- transceiver carrier detect indicator which was signalled across the satellite circuit to provide the transceiver PTT at the other end,
- transceiver PTT which was controlled from the satellite circuit signalling provided from the transceiver carrier detect indicator at the other end.

Amateur Transceivers

Transceivers on the 2 metre band were installed at all earth stations except Canberra, where a UHF Link was installed between the earth station and a radio amateur's home.

This technique was used to enable the choice of 2 metre outlets through local repeaters in Canberra. There were three transceivers installed in Sydney.

Amateur Frequencies and Repeaters

City	Frequency MHz	Site	Repeater
Brisbane	147.300	Mt Glorious	VK4RQT
Canberra	146.900	Black Hill	VK1RAC
	146.950	Mt Ginini	VK1RGI
	(only one at any one time)		
Darwin	147.000	Palmerston	VK8RTE
Melbourne	146.500	Aussat - East Burwood	Simplex
Perth	146.800	Herne Hill	VK6RTH
Sydney	146.875	Terry Hills	VK2RMB
	146.625	Razorback	VK2RLD
	145.525	Aussat - Belrose	Simplex

Operational Considerations

When two repeaters are linked together over the satellite an undesirable effect is created. The link and the repeaters get themselves into a cyclic lockup. I hope everyone can follow this explanation.

We'll start with the local earth station transceiver transmitting to the local repeater. At the completion of its transmission it will go into receive mode and therefore will see the local repeater tail. This tail will be transmitted across the satellite to the remote earth station transceiver. This transceiver will go into transmit mode for the length of the local repeater tail. The remote transceiver will then see the remote repeater tail, transmit that back across the satellite causing the local repeater to transmit again, and round and round we continue forever.

There are two solutions:

1. Remove the tail from at least one of the repeaters, or
2. Introduce a delay on the earth station transceiver carrier detect so that the tail does not cause the transceiver at the other end to transmit

Solution 1 was adopted at all sites except Canberra as it would have been very difficult to remove the tails of the two repeaters used.

Solution 1 also has a side advantage and a disadvantage.

When a geostationary satellite is placed in the transmission path an extra delay is added. When repeaters are used at both ends of the path the delay between overs increases. Allowing 2 second repeater tails and the satellite propagation time of .25 second gives a total delay of 4.25 seconds. Removing the repeater tails reduces this delay.

However, with removal of the repeater tail any marginal signals into the repeaters were accentuated, because the repeaters now tend to chop in and out, where previously the tail would keep the repeater transmitting.

Also, many radio amateurs realised there was no tail and thought they were not accessing the repeater or that it was out of service.

In Canberra solution 2 was adopted as the local radio amateurs wanted to be able to select different repeaters. The earth stations are unmanned at weekends and it was impossible to retune the earth station two metre transceivers.

The solution in Canberra was to use a UHF link which allowed the choice of more than one repeater.

The opening broadcast on Saturday afternoon by the Governor General, Sir Ninian Stephen, was relayed from Government House, Canberra, via the UHF link on to the satellite to Sydney. From there it was distributed to all other sites.

The carrier was interrupted at regular intervals by those in Canberra to ensure that the remote repeaters did not time out.

After the broadcast , the links were reconfigured with Brisbane connected to Darwin and Canberra to Sydney, Perth and Melbourne were connected via Sydney thus introducing a double satellite hop. This appeared to cause no problem.

There were two further reconfigurations during the weekend as follows:

(1 Canberra - Darwin. Brisbane - Sydney.
(2) Perth - Sydney. Melbourne - Sydney.
Brisbane - Canberra. Darwin - Sydney.

Packet Radio

Enthusiasts in Perth and Melbourne tried to hook-up using packet radio via the satellite but their attempts appeared to be unsuccessful.

The WIA Federal Technical Advisory Committee Packet Radio Co-ordinator, Peter Hallgarten VK3AVE said; "We tried to exchange packets with people in Perth but to my knowledge there were no successful connections."

The packet attempts were carried out mainly around midnight Friday and early Saturday. Packet radio users on both sides of the continent were eager to make contact.

Peter Hallgarten said he could see data coming through from two VK6's talking to each other, but a transcontinental hook-up did not take place.

The next time the Aussat system is available further attempts would be made to exchange packets across the nation.

It could be a simple matter of sending "sync characters" first to help overcome the transmission path time delay factor, he said.

Conclusions

We gratefully acknowledge the co-operation of the Department of Transport and Communications in each state. We also wish to thank all AUSSAT staff at all the earth stations for their assistance with the installation of equipment.

The radio amateurs who provided equipment at each of the capital citites were :

Brisbane	Mark - VK1ZDX
Canberra	Alex Johnson - VK8ZWM
Darwin	Spud Murphy - VK3ZPP
Perth	Will McGhie - VK6UU
Melbourne	Peter Mill - VK3ZPP

Many on air comments of appreciation were made, with the hope that something similar will happen again

The co-ordination of the links and the

installation at the Aussat Sydney earth station were carried out by Aussat staff, Neil Fallshaw VK2XNF and Laurence Adney VK2ZLA.

The Wireless Institute of Australia expresses its appreciation to AUSSAT for its support. Plans were underway to more widely publicise Aussat's role to the general public during this year's JOTA in October.

SHOWCASE

200 Channel Scanner

Captain Communications at Parramatta has just released the latest in scanning technology from Uniden. The model UBC200XLT has no less than 200 channels and covers a wide range of frequencies, from 66 MHz up to 956 MHz, a first for a handheld scanner.

The scanner offers highly sophisticated functions, including 10 priority channels, channel lockout, delay and search. The 200 memory channels are split into 10 20 channel banks. All channels are programmed through the numeric keypad.

The UBC200XLT is supplied complete with a rechargeable ni-cad battery pack and charger. It provides up to 5 hours of dependable use. The scanner can also be run via the AC adaptor/charger, or from external 12 volt power where available. The frequencies stored in memory are thoughtfully protected from loss by a built-in capacitor which protects the memory for up to 30 minutes when replacing batteries.

Features:

200 Channel memory. The UBC200XLT has 20 channel scanning capacity split into 10 20 channel banks. All channels are programmed through the numeric keypad.

12 band coverage:

10 Priority channels. The first channel of each bank can be selected as priority channels to be monitored every 2 seconds for important transmissions.

Detachable, rechargeable battery pack.

Allows for a second set of batteries so that the receiver is never without portable power.

Channel lockout.

Select any number of channels to be skipped during the scan mode.

Scan delay.

Add a two second delay to any channel to avoid missed transmissions or call backs from dispatches.

Automatic search.

Search for new active transmissions to add to your scan memory in any of the bands.

Illuminated display.

A large LCD shows the current frequency and channel as well as other operating features and modes.

Specifications

Frequency range
66-88MHz
118-136MHz
136-144MHz
144-148MHz
148-174MHz
406-420MHz
420-450MHz
450-470MHz
470-512MHz
806-956MHz
Scan speed: 15 channels per second (scan)
25 channels per second (search)
Display: Illuminated Liquid Crystal
Power requirements: 12V DC (battery, adaptor or vehicle adaptor)
Sensitivity: 0.3 uV
Selectivity: -55db @ -25kHz

For further information contact:

Captain Communications,
28 Parkes Street, Parramatta 2150
Phone (02) 633 4333,
Fax: (02) 891 2271

Captain Communications Releases Miniature Digital Frequency Monitor for Transceivers and Receivers

Capital Communications of Parramatta has just released a miniature frequency monitor designed for displaying the frequency of both transmission and the frequency the receiver is tuned to. It is ideal for users of both transceivers and receivers who need accurate digital readout of frequency. Many older sets can be brought up to full "digital" standard with this five digit frequency monitor. It is suitable for both HF and VHF operation, with coverage from 1kHz to 250 MHz in two bands.

Unlike conventional frequency meters, the FC-200 can read both the frequency going out to the antenna and the frequency of the received signal. The latter is managed by a down system based on the receiver's local oscillator and by subtracting 455 kHz.

The monitor comes complete with PL259 connectors for transceiver and antenna and with inputs for pickup of signal from the receiver's local oscillator.

Specifications:

Frequency range: HF: 1kHz-54MHz
VHF: 50MHz-250MHz
Standard Oscillating Frequency: 10MHz +/- 0.0005%.
Input Impedance: 1M ohm, 20pF
Power Supply: DC 13.5V
Environment: 0-40 degrees C

For further information call:

Captain Communications,
28 Parkes Street, Parramatta 2150
Phone (02) 633 4333,
Fax: (02) 891 2271

Optical Fibre

We read so much in the press about the applications of fibre optics for telecommunication purposes and very little about its uses in other industrial areas. Long before fibre optic cable was found capable of transmitting long distance communication signals, it was used for lighting in medical and industrial applications. Its great advantage is that it provides a "cold" light and the light source is remote from the light head.

Typical application has included road signs where the light source is at ground level and lamps can be easily accessed should failure occur. Medical applications, other than providing light for internal examination and microscopes, have included culture growing. The arts use fibre optic cable for stage effects and even the museums found fibre optic cable ideal for illuminating ants nests and places where heat was undesirable. Industry uses it for accurate machine positioning (including robotics) and it is ideal for security looping in place of wires that can be tapped or broken. Even the hobbyist has found uses for lighting model railways (Star ships look fabulous when lit using fibre). FORT is offering a range of plastic fibre that is ideally suited for industry, lighting and the hobbyist. A leaflet describing the fibre, together with a sample, can be obtained by sending a stamped addressed envelope to

Fibre Optic Research
& Technology Pty. Ltd.,
P.O. Box 231, Frenchs Forest,
NSW 2086.

ACME Connector Catalogue Released

National cables and components distributor, ACME Electronics, has just released a new connector and accessories

catalogue which details more than 300 products stocked and distributed by the company.

ACME Electronics, a division of Hardie Technologies, this year celebrates 40 years of service in the electronics industry.

"The catalogue details all our mainstream connector and accessory products in a simple and easy-to-follow manner", said ACME Product Marketing Manager, Ted Harnett.

"It is free and available from any of our branches in Victoria, New South Wales, Queensland and South Australia, as well as our agents' offices in Western Australia, the Northern Territory and Tasmania", he said.

The catalogue includes sections on BNC, BNC High Voltage, TNC, N, Twin, UHF, SMA, Between Series Adapters, Resistor Loads, C27 Push-on, RF Patching System, 19" Patch Panels and Faceplates, D Subminiature, plus Tool and Die Sets.

"The catalogue is structured so that it includes an excellent cross-reference to the extensive range of Belden Coaxial cables stocked by ACME", Mr. Harnett said.

ACME Electronics distributes and supports a wide range of products from Kings Electronics, Belden Wire and Cable, Greenpar Connectors and Grayhill. The company also manufactures a wide range of connectors and components.

Free Electronics Guide

ACEL Information Pty. Ltd., supplier of specifically targeted technical information, is giving away introductory copies of its new Electronics Yearbook, completely free of all charges including postage.

The idea behind this generosity, unusual in these days of careful cost accounting, is ACEL's confidence that once users try the Yearbook, they will be keen to buy next year's issue. Of course, the free offer is without obligation on the 1990 issue.

The ACEL Electronics Yearbook has over 260 pages of data, and provides a comprehensive guide to suppliers in the electronics industry. It contains details information on Australian suppliers of local and imported products, brand names and overseas agencies. Two special features unique to ACEL's Yearbook are a logo identification section, and an index of catalogues available from suppliers.

To obtain your copy of this valuable source guide, write to

ACEL Information Pty. Ltd.,
P.O. Box 1040, North Sydney 2059,
or phone Sydney (02) 922 6088,
Melbourne (03) 529 5200 or
Brisbane (07) 206 8031.

Report of Federal Videotape Co-ordinator for year ended 31st December 1989

In 1988–89 there was an overall drop in the number of titles requested, due in part I suspect to the fact that during the year we started to charge individuals and libraries for the copying service. If the fees have encouraged groups of Amateurs rather than isolated individuals to order dubs, then the number of people actually benefiting from the service may well have increased, but there is no practical way to determine this.

I am presently experiencing some problems with both my VHS Recorder and with my master playback Umatic VCR.

The VHS VCR recently required a new set of video heads which, when fitted by the local service agents, failed to come up to specification with the result that it has been out of commission for over two months. (As I write this the recorder is in fact in Sydney with JVC who are trying to determine the source of the problem!)

However, it is the master Umatic player which gives me the greatest cause for concern; it is getting near to the end of its service life and at current prices would cost about $2,000 to replace! However, surely it must be possible to locate a used Umatic VCR of more modern vintage at a reasonable price.

The existing Umatic VCR is a JVC 6000 which was built in the days of "dual fixed–speed motor, slipping belt" technology. Because of the inevitability of regular belt replacement due to wear, this type of unit has been superseded in more recent years by use of "multiple servo–controlled or quartz–locked direct drive motors" wherever rotation is required.

Ideally I'd like to locate a "Sony" front–loading Umatic VCR to replace the JVC 6000. If anyone reading this knows where one might be available at a reasonable price please let me know. If a suitable VCR can be located, it will materially extend the life of the WIA Video Library which of course would be of benefit to all Amateurs.

To date, the WIA Video Library has only been promoted within our fraternity in "Amateur Radio" magazine so that non–amateurs have had little opportunity to know of the Library's existence. My intention is to promote Amateur Radio as a hobby by circularising all schools, firstly (as a trial) in my own State and then nation–wide, to advise them that good promotional and educational videos about Amateur Radio are available at very little cost through the WIA Video Library.

If a suitable Umatic VCR is not otherwise forthcoming, perhaps a one might surface as a spin–off of the above promotion from a shool in which Umatic VCRs have been superseded by VHS VCRs.

John F. Ingham, VK5KG
Federal Video Co–ordinator

AEM Stops Publication

Australian Electronics Monthly (AEM) has ceased publication after nearly four years.

And its competitors Electronics Australia (EA) and Electronics Technology and Innovation (ETI) have slightly changed editorial direction.

AEM editor Roger Harrison VK2ZTB said it was very disappointing having nurtured the publication and worked up to 100 hours a week with his wife Val, eldest son Jamye, and youngest son Corey, still at school.

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The publication had been aimed at what he saw as an unfilled niche in the competitive magazine market.

Roger said the January edition was on the presses, February had been completed and work begun on the March edition, but publication had to cease due to a breakdown in financial negotiations.

AEM sales and subscriptions were picking up in 1988 with the magazine having overcome the critical early stage of such ventures.

"We could not reach a final agreement with a financial investor after six months of very positive negotiation", Roger said.

Kedhorn Holdings, the publishing company of AEM, went into voluntary receivership.

Roger said outstanding mail orders for software and books are currently being processed, anyone with such an outstanding order can write to the AEM listed mail address.

It is understood a special offer will be made to readers who have subscribed to AEM.

Roger Harrison now works for a company called the Apogee Group, which is packaging editorial material for ETI. Roger will be listed as Electronics Editor for ETI from the May issue.

From the June issue some three-quarters of ETI will be provided by Roger and the team from the Apogee Group.

This will see a greater emphasis on electronics and communications in ETI, and at the same time EA has announced it will move in the same direction.

Roger said the situation regarding outstanding contributors to AEM is being considered in view of procedures related to the liquidation and they will be written to in due course.

The Ron Wilkinson Achievement Award

Back in 1977, Mrs. Mary Wilkinson widow of the late Ron Wilkinson, VK3AKC, gave to the WIA a sum of money to be invested so that the interest would pay for an annual award in memory of her husband.

The Award was to be made in the month of March, and was to be for special achievement in any aspect of amateur radio. Ron, whose birthday was 3 March, had been a notable pioneer in "moonbounce" experiments, among many other interests.

The Award is in the form of an attractive certificate, plus a sum of money, initially $50 but now $200, which includes a free WIA subscription for one year.

Winners of the Award so far have been:

1977 Wally Green VK6WG and Reg Galle VK5QR for Adelaide - Albany communication on 1296 MHz.

1978 Winston Nichols VK7EM for achievements in amateur TV, and Alf Chandler VK3LC for service to Intruder Watch.

1979 David Wardlaw VK3ADW and Michael Owen VK3KI for their amateur representation at WARC79.

1980 Ces Bardwell VK2IR for 20 years service to Amateur education.

1981 Ray Jones VK3RJ for service as Federal QSL Manager. Hon mention jointly to Gill VK6YL (WA repeater group) and Peter Smith VK1DS, for repeater design and installation.

Arthur Oliver VK6ART. Photo courtesy Neil Penfold VK6NE

1982 Dick Norman VK2BDN for notable work in VHF, UHF and microwaves.

1983 Peter Smith VK1DS and Ken Palliser VK3GJ for innovative work on repeaters.

1984 Lyle Patison VK2ALU for many years of "moonbounce" work.

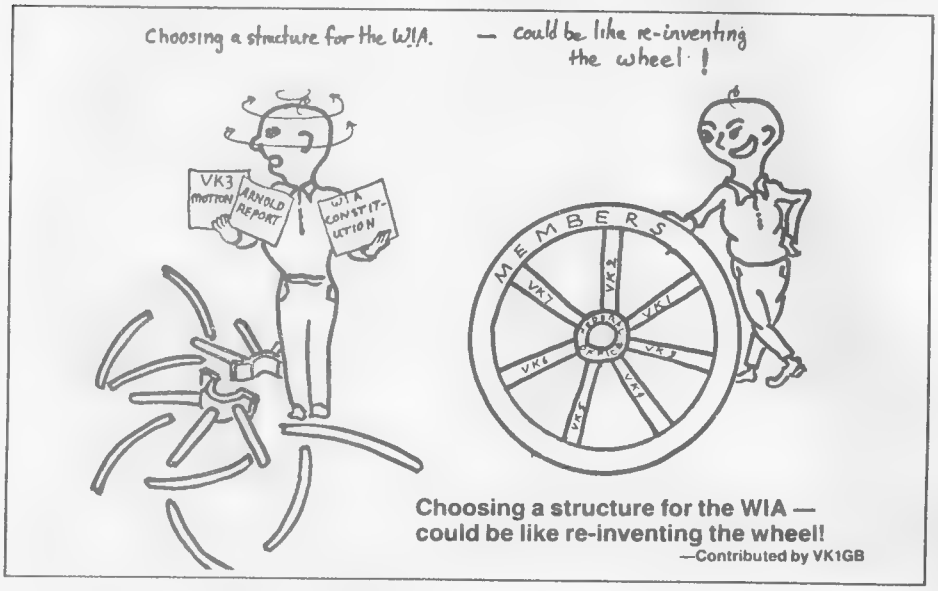
1985 Doug McArthur VK3UM for pioneering work in aircraft enhancement of propagation.

1986 No nominations received.

1987 Eric Jamieson VK5LP for many years service in contributing the "VHF/UHF - An Expanding World" column to

Which brings us to the recipient of the Award for 1988. He is Arthur Oliver VK6ART, who was nominated by the VK6 Division for his service to the travelling Amateur population for at least six years of daily dedication to the Travellers' Net. This 20 metre net was established in 1978 by Keith Williams, VK6KC, then of Kuri Bay. Arthur Oliver became the regular control station around 1982, and maintained a daily service until recently. Only a person with a special kind of devotion to their fellows can make their services available at the same time each day, every day, possibly for an hour or more, year after year, with of course no possibility of payment.

Executive were unanimous in their agreement with the WA Division Council that Arthur Oliver VK6ART should receive the Ron Wilkinson Achievement Award for 1988.



Choosing a structure for the WIA — could be like re-inventing the wheel!
—Contributed by VK1GB

Australian TV Broadcast Diamond Jubilee

Jim Linton VK3PC
4 Ansett Crescent
Forest Hill. 3131

This milestone in Australian television would have passed virtually unnoticed - but for the efforts of media historian Chris Long and the National Film Archive.

He had researched the beginning of TV broadcasts in Australia which began on January 10, 1929.

Chris said in that primitive test transmission movie cartoons were broadcast through the transmitter of Melbourne radio station 3UZ. The movies were televised in a workshop in South Melbourne and sent to 3UZ's transmitter in Bourke Street, Melbourne by a landline. They were received by radio in the bayside suburb of Sandringham at the home of engineer Donald MacDonald.

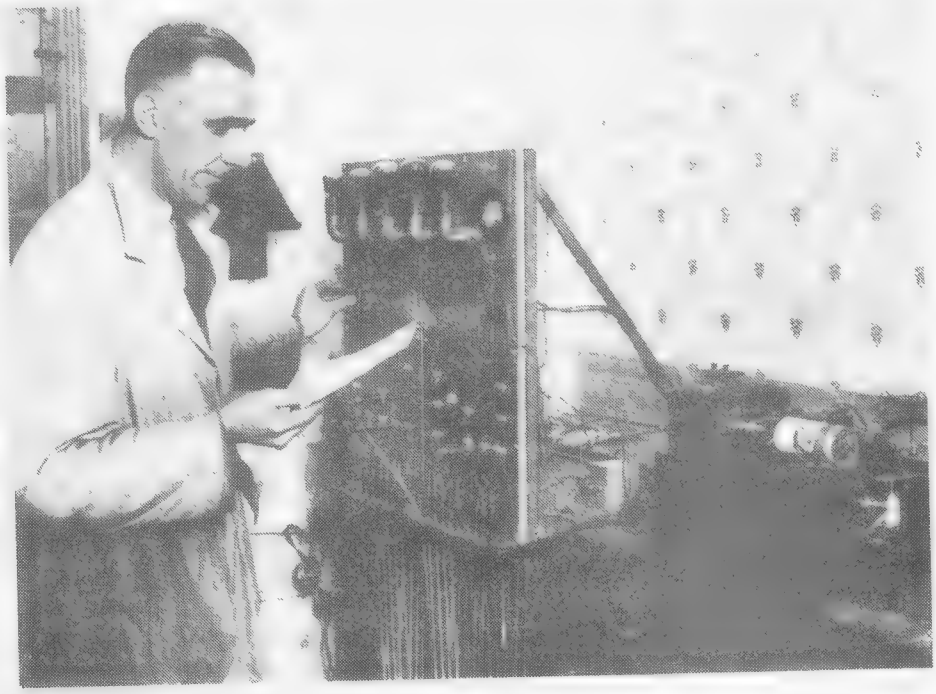
The screen of the receiver was only 4cm square and it showed pictures of simple silhouettes, like a rotating windmill, children on a see-saw, or printed titles, Chris said.

Mr MacDonald set up a firm called Television and Radio Laboratories in September, 1927, with the aim of making Australia's first practical demonstrations of broadcast television. In 1925 MacDonald had seen the experimental television tests of the American pioneer C F Jenkins, and while in the United States acquired the key components to build a working copy in Australia.

He was joined by radio enthusiast Gilbert Miles, who built the necessary cameras and receivers. These employed a mechanical scanning system instead of the electronic picture tubes used today.

Chris said: "By modern standards their results were very primitive - pictures of 24 lines instead of the present 625, and with no accompanying sound. But their results represented the state of the art at that time and encouraged them to broadcast television programs on a regular basis until the great depression set in at the end of 1929."

Years later Gilbert Miles constructed a replica of his early television system which can be seen on display at the Museum of Victoria. After the war, he moved to NSW and acquired the callsign of VK2KI. He died in 1981, long after our modern TV systems were established.



Gil Miles and the early TV transmitter, circa 1929.

MacDonald published Australia's first television magazine, Radiovisions, in monthly issues between September 1928 and October 1929. Copies are held by the State Library of Victoria.

Late in 1929 the British Baird Television Company set up a closed circuit television system for demonstrations at Menzies Hotel, Melbourne.

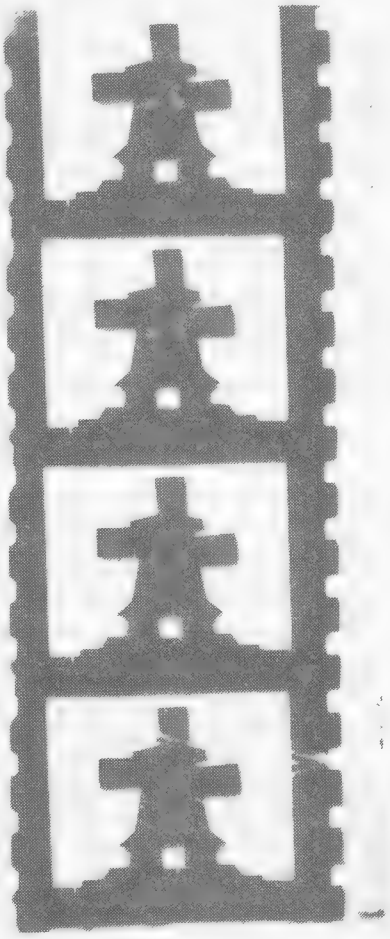
Sydney's first transmissions were made by experimenter Ron Chilton in 1930, then Brisbane followed in 1934 with transmissions from the Observatory Tower in Wickham Terrace.

Australia's first commercial TV station licences were granted in 1955 following a Royal Commission on the introduction of television.

TV had been resisted by authorities in the immediate post-war era because of higher priority matters including housing, immigration and industry reconstruction.

There was also considerable argument over whether Australia should adopt a British BBC-type TV service, or open the medium up to commercial interests.

Two commercial TV stations in Sydney and two in Melbourne began transmissions in 1956 which included coverage of the Melbourne Olympics.



(Windmill) First test film transmitted over 3UZ 10 January 1929. Australia's first TV program material.

Pitcairn Island - A Ham's Paradise

David F. Miller NZ9E
(in collaboration with Meralda Warren VR6MW)
7462 W. Lawler Avenue
Niles, IL 60648 USA

Lying remotely in the mid-Pacific, Pitcairn Island is probably as close to being "a ham's paradise' as any spot on this earth could be! No off-the-air TV, so no TVI! No multi-storied structures to block one's signal, just the vast, blue Pacific in all directions! No antenna restrictions, no tower height limitations, no zoning laws! Very little man-made interference and almost no ignition noise! Toss in being a rare DX catch, and you've come pretty close to the above title!

200 years ago, on January 23, 1790, Fletcher Christian and 8 other fellow "Bounty" mutineers landed on Pitcairn Island, and they, along with 12 Polynesian women, 6 men and one infant girl, set the framework for this modern day "dream QTH". The start of the dream, however, would not be realized until the 1920's, when Andrew Young (later VR6AY), carrying the surname of mutineer Edward Young, would set up shop as Pitcairn's first radio amateur. Andrew was an "amateur" in the purest sense of the word, being unpaid, making do with less than "ideal" conditions, and following his pursuits for the love of the activity. Andrew began operating from Pitcairn with a spark transmitter and a crystal detector receiver provided by an unknown New Zealand radio buff. This set-up served the island until 1938, when he was provided with a "modern" telephony & CW rig donated by a group of American hams after a visit to Pitcairn by the ship "Yankee" in 1937. Since then, Pitcairn has been a part of the amateur radio scene pretty much continuously up to the present. They have evolved more or less in parallel with the rest of us from AM & CW to SSB, and from tubes to solid-state. Today, Pitcairn hams are able to acquire state-of-the-art equipment although at perhaps a greater sacrifice than many of us. Despite the distances and difficulties involved, there are more licensed hams on Pitcairn today (as a percentage of their population) than there are in any other country in the world, 6 licensed hams out of 50 people! In alphabetical order, they are: VR6ID, Irma Christian; VR6KB, Kay Brown; VR6KY, Kari Young; VR6MW, Meralda Warren; VR6TC, Tom Christian and VR6YL, Betty Christian, all permanent islanders. VR6CL, Carl Lipscombe is also residing on Pitcairn at the time of this writing, and would be number 7 if he makes the island his permanent home. Amateur radio on an island as remote as Pitcairn differs a little from the way it is for the rest of us. Public power is available, but only for a relatively short while twice each day depending on available fuel supplies. The island has two British-made diesel generators that output 240VAC, and most homes have lines running into them from the "public power". Many of the islanders (the hams most particularly) have private diesel generators that can be run whenever the need for electricity arises, but they must also stock private fuel supplies and pay the premium price for it. The newer all-solid-state transceivers are thus becoming more popular among Pitcairn hams because of their ability to operate efficiently directly from a 12 volt battery, which can then be re-charged when the public power is functioning. Wind generators have also been tried in the past but without a great deal of success, due mainly to mechanical breakdowns and high maintenance requirements. Solar is still quite expensive and not capable of supplying large quantities of electricity at present. Pitcairners must be very practical, their time is too demanding to be otherwise, so they've chosen to stick with what works well and suits their requirements, ie diesel generators. Hopefully in the future, renewable energy schemes may prove themselves more useful.

Antennas.

Even though the island is only 1 mile by 2 miles, antenna space doesn't seem to be a big problem! There are plenty of taller trees from which to string a dipole, but the Pitcairn hams have found, as have most of us, that a beam on a mast can offer a premium of gain for both receiving as well as transmitting, more so than any other addition to the station, even if it has to be rotated by the "arm-strong" method! Tribanders for 10, 15, & 20 metres are most popular with a wire dipole for filling in the rest of the bands. Unpredictable, and often high, winds keep them busy at times re-stringing the tree-supported dipoles, just like the rest of us!

For the Pitcairners, however, amateur radio has proven to be more than simply a

Photo by Meralda Warren, VR6MW, Pitcairn Island

hobby, it has been, and will continue to be, a life-line to the outside world in times of emergency. A number of medical emergencies have been handled over the past years via ham radio, making dependable amateur communications a source of some comfort for the island residents. A Government sponsored "commercial" short-wave station (ZBP) is also located on Pitcairn, with twice daily communications to New Zealand some 3,000 miles (5,000 km) distant. Like the amateur bands, the frequencies used by the Government station are subject to the whims of propagation, so a satellite transceiver has been available on Pitcairn for 2 years now, utilising a "retired" NOAA weather satellite which was transferred back to NASA for experimental and humanitarian needs in the South Pacific. The system operates on frequencies assigned to the early satellite service and is available from its geostationary orbit 24,500 miles out in space, 24 hours-a-day for medical or other emergency needs. A series of DTMF tones will bring up an autopatch in the United States allowing the Pitcairn control station to make a state-side phone call to seek emergency medical advice. A hospital in the Chicago area has volunteered its facilities and expertise at any time of the day or night and has been briefed on the special needs of Pitcairn, bringing the island one step closer to modern technology. This has been accomplished at no cost to the island or its Government in New Zealand. Amateur radio, however, still plays a very important role in the non-emergency, day-to-day needs of the island residents, and many state-side hams have volunteered their time and stations for this cause, for which the Pitcairners are deeply appreciative. Ham radio will continue to play an important role in Pitcairn's well-being as far as it is possible to see into the future.

News.

Amateur radio has also proven to be an important source of news and world events for the residents on Pitcairn Island. Many on the island do have short-wave receivers for listening to International Broadcasts, but again, depending upon propagation conditions and time available to the people, news of the rest of the world can be somewhat difficult to obtain at times. The next time you talk to Pitcairn, you might be able to help in this regard by relating to them some of the current news stories that you feel might be of special interest to them.

Supplies are brought to the island (including mail) only 2 or 3 times each year on average! You have to do your Christmas shopping early to live on Pitcairn! The supply ships come from New Zealand and are organized by the Pitcairn Islands administration in Auckland and Wellington. A couple of commercial container vessels have also been stopping each year, flying the Norwegian and British flags, simply as a courtesy to the island. These ships often depart from US ports, so that it has been possible to place a limited number of parcels on-board for Pitcairn, from state-side friends. Under a special agreement with the British Government, ham radio can be and is used to organize personal items for Pitcairners, because of their extreme isolation and lengthy time between ships. Amateur radio is thus much more than simply a "hobby" for the people of Pitcairn, although the hams on the island do enjoy that aspect of radio as well, but appreciation by all of us of the island's special needs and the limited time available to many of the residents will help to explain why DXing isn't always possible for the VR6's.

Pitcairn is a British protectorate and as such, is administered by the British Consulate General in New Zealand. To become a licensed radio amateur in the past, a Pitcairner would have to travel to New Zealand to sit (take) the exam. Recently, however, it has been possible to sit the exam on the island itself under the watchful eye of the Island Government Officer who also serves as the school teacher. This accommodation is similar to the VE (volunteer examiner) program in place in the US Most of the Pitcairners already have some knowledge of Morse code, as that is the form of signalling used on the island's single-party-line telephone system! Each resident has his or her own separate CW designator to alert them of a phone call incoming. To win an amateur radio licence, however, the candidate must still pass a CW test of 6 WPM for the novice licence, or 12 WPM for the general licence, plus successfully complete a written examination much like the American. With only 2 or 3 mail deliveries per year, however, it may be some time before the licence actually arrives from New Zealand!

Many of the amateur operators are also employed at the Government station which communicates (as previously mentioned) with New Zealand as well as with ships at sea using both voice and CW modes. HF is used for maintaining contact with ships "over the horizon", and VHF for distances out to 50 miles or so. The commercial (Government) station is located on the largest flat spot on the island also known as "Taro Ground", and sports a large wire array along with a variety of meteorological monitoring equipment. Traffic handling can become quite hectic at times up at ZBP when large amounts of Governmental or island related messages must be passed. The complexities of the "outside world" are understood and often strongly felt on Pitcairn today, as they are throughout the rest of our planet.

The years 1989 & 1990 are of special importance to the Pitcairn people, for it was on April 28, 1789, 200 years ago, that Fletcher Christian took command of HMS. Bounty and set Lt Wm Bligh and the others who chose to stay with Bligh, adrift in an open longboat, to begin what has since become history's most celebrated mutiny. Bligh himself made history by the mutiny since it precipitated the longest open-boat voyage on record, with no loss of life, some 3,600 miles and encompassing 41 days at sea. Fletcher Christian, on the other hand, vanished from the eyes of Western civilization by setting fire to the Bounty off the shore of Pitcairn some 9 months after the mutiny (January 23, 1790). Christian, the other mutineers, and their small contingent of Tahitian followers "re-discovered" Pitcairn which had been first sighted 23 years before, but due to a miscalculation, has been incorrectly charted on the Royal Navy's maps of that time. By erasing all traces of the Bounty and by concealing their homes within the lush vegetation of Pitcairn, the mutineers managed to avoid discovery by His Majesty's Navy which would have meant almost certain death to the members of their colony. But as history would have it, the Pitcairners flourished and still do to this day!

Postscript:

Be sure to watch the various amateur radio publications for notices of Special Event stations from Pitcairn commemorating the Bicentennial of The Mutiny on the Bounty and of the landing at Pitcairn. Bounty Day (January 23) is Pitcairn Island's Independence Day, and Bounty Day 1990 is of great historical significance to the island.

Special Event Operation

In commemoration of the highly celebrated "Mutiny on the Bounty" to the radio amateurs on Pitcairn Island in the South Pacific, who are also direct descendants of the Mutiny, will be operating special event stations on the 200th anniversary of the Mutiny on April 28, 1989. Intended hours of operation will be from 0000Z to 2359Z on the 28th as individual time and band conditions permit. Look for VR6ID, VR6KB, VR6KY, VR6MW, VR6TC and VR6YL on 10M, 15M, and 20M (exact frequencies not available) and obtain your report and contact number. For a special QSL card, send your card, contact number and a SASE to: Bounty Mutiny Day, 7462 W. Lawler Ave., Niles, IL 60648 USA.

A 28 MHz Broadband Preamplifier

Lloyd Butler VK5BR
18 Ottawa Avenue, Panorama, SA 5041

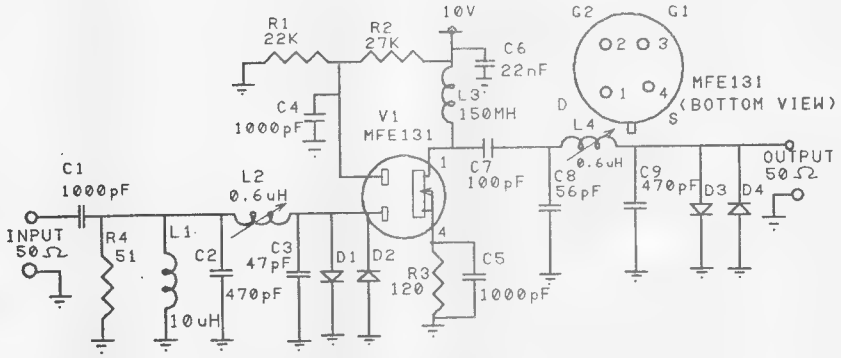


Figure 1 - 28 MHz Preamplifier Circuit Diagram
L1, L3 - Miniature ferrite cored inductors (value not critical).
L2, L4 - 10 turns on 5 mm Neosid former, 24 SWG spaced to about 6 mm plus tuning slug and shielding can.
D1, D4 - IN914 or similar.

Here is a simple amplifier to improve your reception performance on 10 metres.

Some of the older transceivers with a valve receiver front end, such as the FT-200, work quite well on most bands but are a little in-sensitive on 10 metres. If you own such a transceiver, as does the writer, its performance on 10 metres can be dramatically improved with the addition of a suitable preamplifier. The article describes such a preamplifier, which was built by the writer and operated in conjunction with an FT-200.

Amplifier Design

The circuit of the preamplifier is shown in Figure 1. The transistor (V1) is a MosFET type MFE131 which operates with a drain current of 6.5 mA. (This could vary with individual MFE131 samples). A high drain current is important because the noise from a field effect transistor (FET) is essentially equivalent voltage noise which is inversely proportional to the square of transistor current.

The input and output circuits are simple Pi networks designed with a loaded Q factor to give a bandwidth of approximately 1 MHz. The intention is to centre tune at the active section of 10 metres on 28.500 MHz with good performance spread between 28 MHz and 29 MHz. Coils L2 and L4 are wound on Neosid five millimetre formers and fitted in Neosid can assemblies. Trimming of tuning is set by adjustable tuning slugs in the formers.

Diodes D1 and D4 provide protection against RF from the transmitter being coupled via the capacitance of the relay contacts which are used to switch out the amplifier on transmit.

The amplifier is designed for an input and output impedance of 50 ohms.

Performance

The measured gain versus frequency response of the amplifier is recorded in Figure 2. At the centre frequence of 28.500 MHz, the gain is 21.5 dB. At 28 MHz and 29 MHz, the gain falls to 17 dB.

Using a home built thermionic noise generator, a noise figure of 4 dB was measured for the preamplifier. This was a considerable improvement on the noise figure for the FT-200 into which the preamplifier was coupled. The highest level the noise generator can deliver corresponds to a noise figure of 12dB and the FT-200, on its own, measured worse than that. The 28 MHz band performs much like a VHF band in which the noise floor is often set by the noise in the receiver rather than from the noise which comes in from the antenna. Because of this, noise figure on 28 MHz is an important consideration.

From an operational point of view, the effect of the amplifier on the performance of the FT-200 was quite dramatic. Signals which barely moved the S-meter without the preamplifier were raised to S9 with the amplifier switched in. The amplifier also pulled out of the noise weak signals which were barely apparent and not readable without the amplifier.

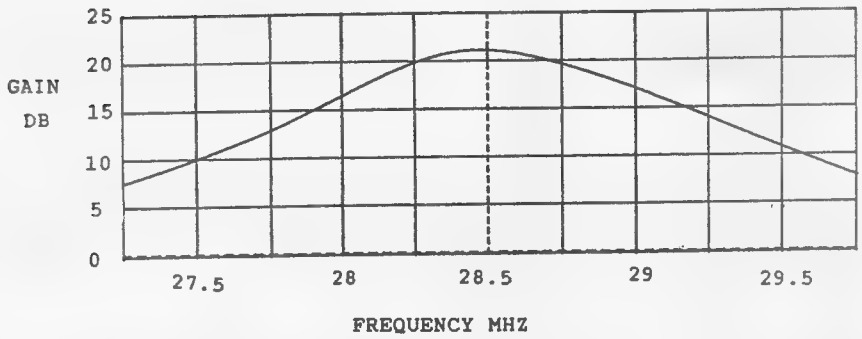


Figure 2 - 28 MHz Preamplifier - Gain vs Frequency

Amplifier Assembly

The amplifier was wired up on a 70 millimetre by 35 millimetre piece of Veroboard of the type with individual printed pads at each hole. The layout of components and the tinned copper wire strapping at the rear of the board, is shown in Figure 3. The strapping as shown could easily be made into printed circuit form.

Tuning up is easy. Simply set the transceiver to 28.500 MHz and adjust the slugs of L2 and L4 for maximum noise.

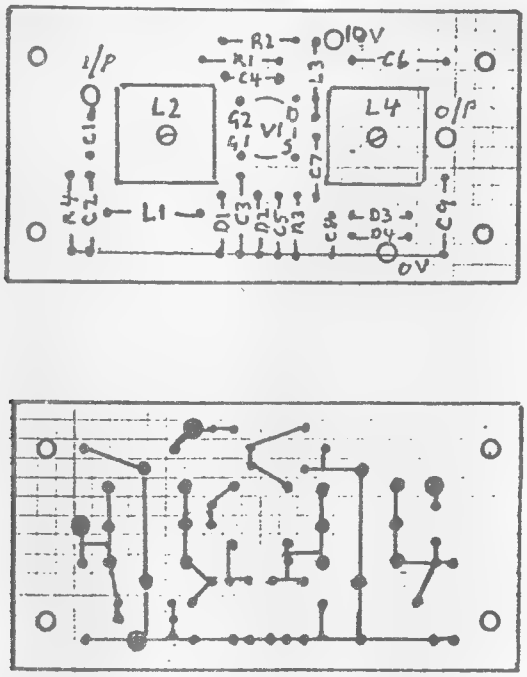


Figure 3. Pre-amp Card Layout

Powering and Switching

Having built the preamplifier, there were two other matters to resolve. One was the provision of a relay to switch out the amplifier on transmit or when the transceiver is used on bands other than 10 metres. The other was the provision of DC power for the preamplifier and the relay. The relay used by the writer was one obtained at sale price from Dick Smith Electronics. It has a 430 ohm coil, two change-over contacts and would operate on voltages as low as 10 volts.

Just how DC power is provided and how the relay is operated depends on what facilities are available within the transceiver. In the case of the FT-200, the writer decided to rectify the 12.6 volts AC valve heater supply as shown in Figure 4. Diode D1 provides rectification and this is followed by ripple filter C1, R1, C2. The relay operates from 15 volts and the amplifier, with extra filtering, operates from 10 volts.

There is a set of auxiliary transmit/receive relay change-over contacts in the FT-200. The make contact of the change-over set was already in use to operate a linear amplifier, so the normal contact was utilised to control the preamplifier relay A. The logic is such that relay A is operated when the preamplifier is active in circuit. Relay A is released on transmit or when the preamplifier is turned off by switch SW1 for other bands to be used. Diode D1 prevents backfeed from another relay circuit which the writer had connected to the transmit/receive normal contact, for a different purpose, not relevant to preamplifier function. Contacts A1 and A2 switch the preamplifier into the 50 ohm RF transmission line connected to the FT-200.

As an extra precaution against stray RF signal over-driving and possibly damaging the MosFET, the power to the MosFET is turned off by transistor V1 during transmit. The transistor was used because there were no spare relay contacts on relay A. Diode D1 limits damaging reverse voltage across the base to emitter of V1. Diode D3 limits the back EMF voltage across relay A.

The power and relay circuits were fitted on a separate card and together with the preamplifier card, fixed into a small aluminium box. The 50 ohm coaxial line between the FT-200 and the linear amplifier was intercepted and connected into the box through BNC connectors. A control cable was wired between a connector on the box and the FT-200 auxiliary plug for power and relay control.

Of course, you do not have to power and control the preamplifier the way described. You might choose to use a small battery or have 12 volts DC already in the transceiver.

Summary

With sunspot activity on the rise, 10 metres is starting to open up causing increased interest in this band. For many of us, with those less exotic transceivers which do not perform as well as they might on 10 metres, a preamplifier, such as the one described is a way of improving that performance.

Reference

1. Amplifier Noise - Lloyd Butler VK5BR, Amateur Radio November 1985.

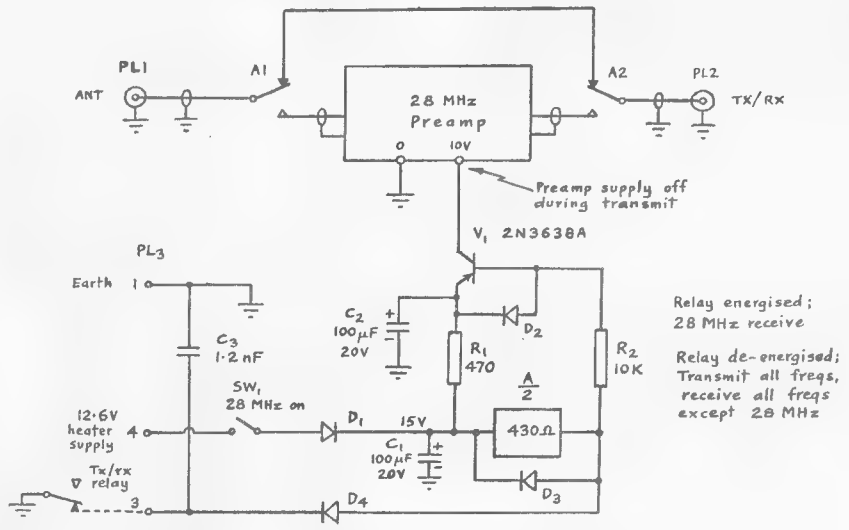


Figure 4. 28 MHz pre-amp. Transmit/receiving switching used with FT200

Topical Technicalities

Lindsay Lawless VK3ANJ
PO Box 112
Lakes Entrance 3909

Power Problems

The purpose of a power amplifier is to convert dc power to ac power controlled by a lower power input signal.

The dc power is usually in the form of a constant (regulated) emf and a widely varying unidirectional current.

Basic information about the likely performance of the combination of amplifier and power supply can be obtained by analysis of the current waveshape resulting from a sine wave input signal.

Ideally the current should contain a component which is an amplified replica of the input signal. The amplifier output circuits must select that component for delivery to a load eg an aerial system. The total current is not a replica of the input signal, it is a dc with superimposed ac. The ac may be a true replica of the input or it may be complex with only one component duplicating the signal input. An output circuit filter selects the signal component.

The efficiency of the conversion process has an ideal maximum which is degraded by the imperfect characteristics of the amplifying devices (at present solid state or electron tubes). The device imperfections also cause the output to be a distorted version of the input.

Solid state devices and electron tubes will surely be replaced with something better in future and it is worthwhile ignoring present limitations to examine what could be achieved. The three classes of amplification, that is, class A, B and C will probably survive independently of device development and that is assumed in the following discussion.

Fig 1 illustrates the current waveform to be expected from each of the three classes assuming a signal input of sine waveform driving the amplifier to maximum capability.

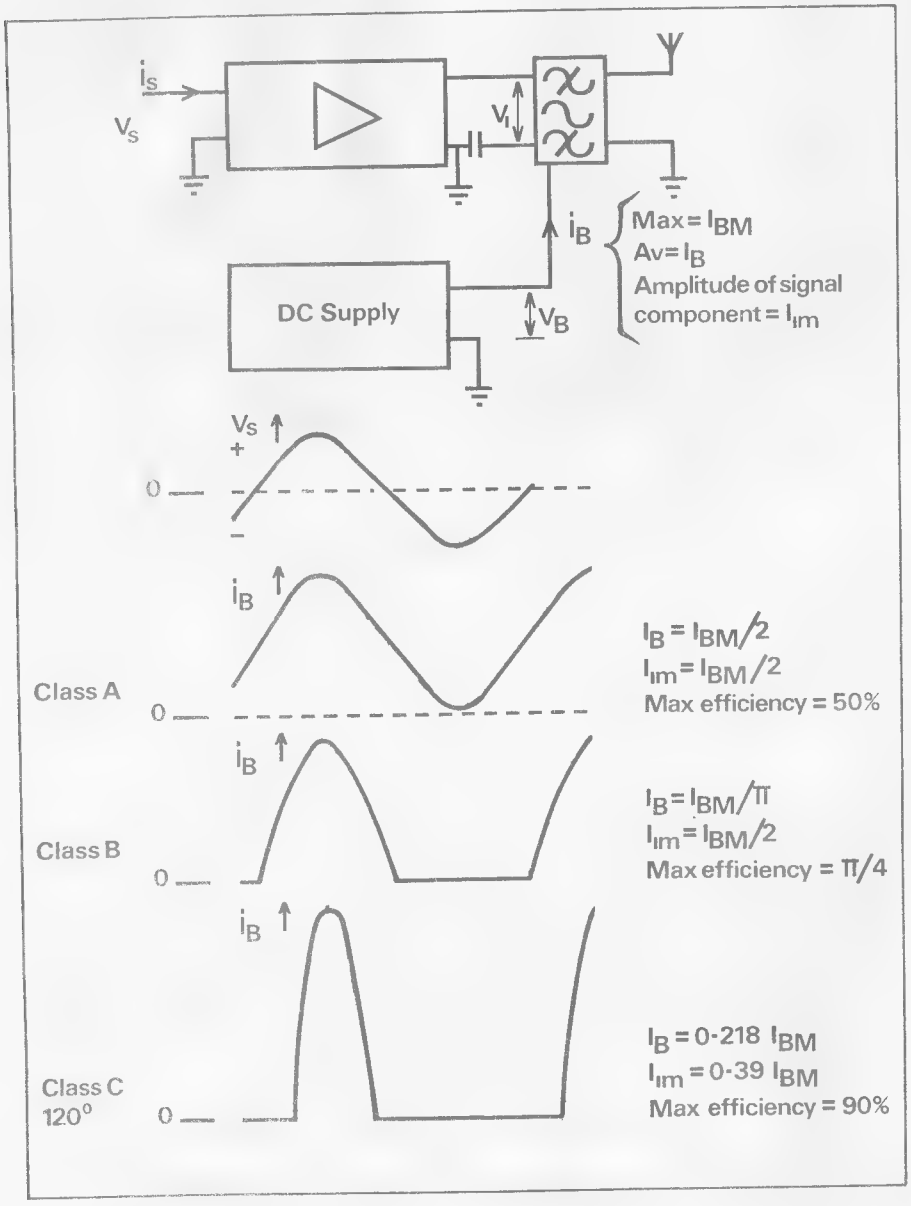


Table 1 lists the supply current average (I_B) the supply current peak (I_{BM}), input and overall efficiency for a 100 watt output system using a 12 volt dc supply. Two conditions are listed for each class, the ideal and that caused by device limited output emf of 10 volts.

Table 1 reveals that a 12 volt supply to a 100 watt linear or transceiver is a really hard worked component. The high currents involved pose special problems for designers and the user. The user must ensure that the designer's efforts to produce a regulated source are not negated by interwiring between supply and amplifier which results in significant volts drop. The example class B amplifier with a peak current of 40 amps would drop one volt over an external conductor of resistance 0.025 ohm.

Filters for such supplies cannot use chokes because of the amount of iron core and the conductor size required to cope with the high current. The only solution is condenser filtering, and, to achieve acceptable regulation and ripple content the condenser must be large. The condenser size is given approximately by :-

$C = I_B/200V_r$ Farad

V_r is the no load to full load volts drop and also the ripple amplitude. Thus for one volt drop in my 12 volt 20 amp supply C needs to be one tenth Farad which is a lot of microfarads. The actual filter preceding the regulator is 0.099F (3 x 33,000uF) and I have no complaints of hum on my transmission. (Note 1)

The above analysis of amplifier performance avoids the complication of device characteristics and that is often a useful preliminary to more detailed analy-

sis. The ratios quoted in Fig 1 are derived from Fourier analysis of the simple waveforms. The idea could be extended to graphical analysis of the more complex current waveform of an actual amplifier.

By the way if a push-push doubler is contemplated the current waveform is like that of a full wave rectifier and -

$I_B = 2I_{BM}/\pi$

$I_{2m} = 4I_{BM}/3\pi$

Maximum efficiency is 30%

Table 1

Class	IB	IBM	Power In	Efficiency
A (a)	16.6 amp	33 1/3 amp	200 watts	50%
(b)	20	40	240	42%
B (a)	10.6	33 1/3	127.3	78%
(b)	12.7	40	152.4	66
C(120°)(a)	9.3	42.6	11.4	90%
(b)	11	51	134	75%

(a) Vim = 12 volts

(b) Vim = 10 volts

(Note 1)

(The use of such large capacitors results in high peak charging currents and a significant increase in the required Volt-Amp rating for the power transformer. Watch for rectifier diode peak current ratings and particularly for increased transformer heating during extended operation! Tech. Ed.)

A Call to all Holders of a Novice Licence

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11 am to 2 pm **M to F**
7 to 9 pm **Wed**

VHF/UHF AN EXPANDING WORLD

Activity 6 and Higher

Eric Jamieson VK5LP
9 West Terrace
Meningie 5264

Amateur Bands Beacons

Freq.	Call sign	Location	Grid square
50.066	VK6RPH	Perth	OF78
50.073	KH6HI	Hawaii	BL11 (1)
52.200	VK8VF	Darwin	PH57
52.320	VK6RIT	Wickham	QG89
52.325	VK2RHV	Newcastle	QF57
52.330	VK3RGG	Geelong	QF21
52.345	VK4ABP	Longreach	QG26
52.370	VK7RST	Hobart	QE37
52.420	VK2RSY	Sydney	QF56
52.425	VK2RGB	Gunnedah	QF59
52.435	VK3RMV	Hamilton	QF12
52.440	VK4RTL	Townsville	QH30
52.445	VK4RIK	Cairns	QH23
52.450	VK5VF	Mount Lofty	PF95
52.460	VK6RPH	Perth	OF78
52.465	VK6RTW	Albany	OF84
52.470	VK7RNT	Launceston	QE38
52.485	VK8RAS	Alice Springs	PG66
144.022	VK6RBS	Busselton	QF76
144.400	VK4RTT	Mount Mowbullan	QG62
144.410	VK1RCC	Canberra	QF44
144.420	VK2RSY	Sydney	QF56
144.430	VK3RTG	Glen Waverley	QF22
144.445	VK4RIK	Cairns	QH23
144.445	VK4RTL	Townsville	QH30
144.465	VK6RTW	Albany	QF84
144.470	VK7RMC	Launceston	QE38
144.480	VK8VF	Darwin	PH57
144.485	VK8RAS	Alice Springs	PG66
144.550	VK5RSE	Mount Gambier	QF02
144.600	VK6RTT	Wickham	QG89
144.800	VK5VF	Mount Lofty	PF95
432.066	VK6RBS	Busselton	QF76
432.160	VK6RPR	Nedlands	QF78
432.410	VK1RBC	Canberra	QF44
432.420	VK2RSY	Sydney	QF56
432.440	VK4RSD	Brisbane	QG62
432.445	VK4RIK	Cairns	QH23
432.445	VK4RTL	Townsville	QH30
432.450	VK3RAI	MacLeod	QF22
432.535	VK3RMB	Mount Buninyong	QF12 (2)
432.540	VK4RAR	Rockhampton	QG56
1296.198	VK6RBS	Busselton	QF76
1296.410	VK1RBC	Canberra	QF44
1296.420	VK2RSY	Sydney	QF56
1296.440	VK4RSD	Brisbane	QG62
1296.445	VK4RIK	Cairns	QH23
1296.480	VK6RPR	Nedlands	QF78
2304.445	VK4RIK	Cairns	QH23
2306.440	VK4RSD	Brisbane	QG62
10368.000	VK3RGZ	Pretty Sally Hill	QF22 (3)
10445.000	VK4RIK	Cairns	QH23

(1) Col VK5RO advises this beacon should now be operational.

(2) John VK3ZJC advises this beacon has been off the air for a month. It is included this time so that it will be on my computer data base but will be omitted next time around if no advice of reinstatement has been received.

(3) John VK3ZJC advises this beacon is still with Les VK3ZBJ but it may be installed in its final location by the time this is read.

Future Beacon Lists: In view of reductions in available space, I have given thought as to how the beacon list may best be handled and propose to follow this pattern:

1. As a result of Cycle 22 having the greatest impact on six metres, a full list of six metre beacons from around the world will appear in June, September, December and March. This takes advantage of the peak periods for contacts via TEP, F2 and Es, depending on the time of the year and will continue until Cycle 22 is no longer important.

2. April, July, October and January will feature a full list of Australian beacons only, on all bands.

3. May, August, November and February will feature Australian beacons on 52, 144 and 432 MHz. This will allow some space in August and February for the Six Metres Standings List to be upgraded and published.

4. Any change to the status of a beacon, irrespective of bands, will be published as received so beacon officers are requested to promptly advise me of any changes please.

For the time being, an overall total list was published in February 1989. Keep this for your main reference. I would like to include a total list every month but realise that this will not be possible.

Six Metres.

As expected, the six metre band refuses to sleep. Almost every day, somewhere, contacts are being made via Es, TEP or F2. With the solar flux having peaks up to 300, is it any wonder Cycle 22 is producing interesting contacts.

Western Australia to Europe.

The outstanding contacts for the month must be the two-way six metre contacts to Europe on

25 February 1989. Alerted by Tony Mann, a West Australian television station DXer, that tv signals from Europe were appearing on 48.246 and 48.260, Wayne VK6WD became the first station in Australia to complete a two-way contact to Europe, by working LA3EQ, followed by LA8WF, both in Norway and OH1YP in Finland. This was on 50.110 MHz between 0830 and 0840 with signals between 5/3 and 5/5. Others to work the LA stations were VK6KXW, VK6ZKO and VK6HK. VK6KXW and VK6HK also worked OH1YP. The Norwegian stations said they were running 5 watts!

At the same time, a report came in that Graham VK6RO had been heard in Sweden by SM6 and by an LA3 station. An unconfirmed report said VK signals were audible in PE (Holland).

Congratulations to the WA boys for their achievement and many thanks to Tony Mann for alerting them to the possibilities of contacts. My thanks to Col VK5RO and Graham VK6RO for information on these contacts.

New Zealand Hears South Africa.

VK5RO sent news that on 25/2 Kerry ZL2TPY heard ZS2DM working European stations at 1945 on 50.110 MHz. He tried to get the stations to come up on 28 MHz but the signals were fading. Also heard the beacons ZS2E on 50.100 and ZS3VHF on 50.018. Signals were 5x6 on the long path at 30 degrees. African stations were working to the west coast of USA and as far inland as Washington.

Col VK5RO also said he and Bill VK5ACY had worked AH610 at 1745 on 12/2 and was advised the Hawaiian station would be running a beacon continuously on 50.073 as KH6HI. Col also reported that JAs had already Worked All Continents this season. Gil, VK3AUI, reported working VK9YQS/0 on Macquarie Island at 0746 on 3/2. Also JE2DWZ, JA2BXY and JR2HJS. VK3s worked into W on 5/2. The same day JA1VOK worked VK3BDL and reported having worked AH9AO on Wake Island. The Wake Island station uses a TR9300 to a 3 e. quad.

On 29/1 at 0255 VK8ZMA worked KX6DS at 4x3. (QSL to Dave Sublette, P.O. Box 4563, Huntsville, Alabama, USA 35815).

On 31/1 at 0920 ZL3TIC was heard calling VK6. At 0952 VK5LP worked ZL2CD at 5x8. Bill said so far that day he had worked VK2, 3, 5, 6 and 7. Short skip to VK3 produced VK3JBC 5x9 at 1012. This was in conjunction with excellent tropo conditions to VK3 on 144 and 432 MHz.

On 2/2 VK6AOM reported several days of weak six metre signals, finally working VK3AUU in the morning. ZLs were through again. On 3/2 worked VK6YAU in Albany on 52.050 at S2. 4/2: 0340 to VK8ZMA and VK8ZLX at 5x9. 7/2: 0930 to H44GR at S4. 9/2: From 0030 USA paging systems were S5 on 40.6 and 40.75 MHz through to 41 MHz. Sundry video carriers around 46 and 46 MHz peaking north east. 12/1: 0322 VK8ZMA 5x9; 0327 VK4DO 5x9. Wally reported working FK1 earlier. At 0735 KH6IAA to VK5ACY/5NY but the KH6 barely audible at Meningie. VK4RO also to KH6.

16/2: 0000 heard VK5NY and VK5BC working VK2 and VK4. Hugh VK5BC is one of the most consistent signals on 50.110. He can be heard at Meningie throughout the day, every day, calling CQ DX on CW, no matter where he places his antenna. For most of 16/2 the MUF was permitting 42 MHz signals to be heard from the USA. 23/2: JAs through at 0430, also on 25/2 and 26/2. On 27/2 JA7 and JA8 were available from 0200 and were still there at 0600. They were working VK4s and signals in VK5 were around S2 to 5.

Brunei

Andrew Davis, V85DA from Brunei has written another letter and says that on 4/1 at 0919 he worked KB6FIQ/DU3. Then on 15/1 from 0005 to JA1,5; 21/1: 0055 JA5,6 and 8; 29/1: 0925 JA2, 4 5; 4/2: 0030 JG2BRI, 0222 JA7WSZ, 0549 XX9CT, XX9KA. At 0650 Andrew said the VS6SIX beacon on 50.075 was S6 but signals from VS6UP were weak.

That contact was arranged via XX9CT who has a scatter path to Hong Kong. Andrew says the XX9 operation may not be permanent, although XX9KA is a resident he doubts if he has six metre gear to use. 1206: JG2BRI and heard beacon JA2IGY weakly. On 5/2 at 0705 he had another contact with XX9KA.

Andrew says he has not as yet heard any VK signals nor any VK TV signals. An antenna rotator soon to be installed may assist the situation. Gerald V85GA has a partly constructed six metre transverter and hopes to be operational later this year.

News from Noumea

Phill, FK1TS, sent a copy of his log from 19/12 to 29/1. He started on 19/12 by working ten ZL1 and 2 stations on 51.110 at 0539; 20/12 and 21/12 two each day in VK2; 22/12: from 1000 VK5OH 5x5, VK6WD 5x3, VK6RO 5x2, VK6KXW 5x2, VK6WD 5x2, VK6KZ 4x1 and VK5AYD 519 CW to SSB. 27/12: JA1,2,3,4,5,7,9,0 for 34 contacts starting at 0938. 30/12: VK5NY 5x9, VK5ZDR 5x9, VK2, VK4, from 0522. 31/12: 0146 VK3XRX, VK5NC, VK3BRZ, VK7ML. At 0213 Phill worked his first W station while his beam was on VK5 - K6STI at 5x2; 0217 W5FF 5x9, 0223 K5FF 5x9, 0236 WA7STM 5x4, 0238 WA7CJO 5x9, 0240 WA7KSF also another five WA7s and four K6s. At 0336 he worked VK2 and ZL2 for quite a good day!

1/1/89: 0726 VK4BRG. 2/1: from 0132 until 0312 worked 16 W6s, and WB7OHF, with signals from 5x1 to 5x9. 3/1: 0720 ZL1TZA. 4/1: from 0206 to 0300, VK1RX, 24 VK3s, VK5NC, VK5ZTS, VK5NY, VK7FB and VK7ML. Each day until 10/1 worked stations in VK1,2,3 and 4 plus VK8ZCU. From 11/1 to 24/1 Phill was in KH6. 24/1 to 28/1 VK1,2,3,4,7, ZL3, JA1,2,4,7 and 9 for 37 JAs.

With Noumea about 1500 km from Brisbane, Phill seems to be well placed for contacts in all directions. If extra hops with Es are accepted, then it is a double hop to VK5 and VK8 and a triple hop to VK6. Sounds like a good place to live during the better part of a solar cycle!

Brisbane

My good friend from Brisbane, John VK4KK/VK4ZJB, who regularly keeps me informed of band happenings, has written to say that on 9/2 stations worked from the Brisbane area were: 0015 W6UXN 5x7, 0130 to 0210 N6CA 5x6, WB6VYH 5x5, N6AMG 5x7, K6HCP 5x5 and KG6JDX/6 5x5. John advises that Joe KG6JDX is back in California and that Joe KG6DX is now the only six metre operator left on Guam.

Thanks John.

Japan.

As usual, the Japanese stations had a ball during October 1988, according to the Japanese "ham radio" magazine, per Graham VK6RO. Although somewhat dated, it may interest readers to know the spread of contacts during that part of the equinox: FK1TK, T20AA, 3D2ER, P29HS, YCOUVO, 5H1HK, PY2BBL, 5W1GP, HL9CB, KX6BA, C21RK, KH2CY, HL88BAS, KG6DX, YB0QC, 3D2AG, P29ZEF, KH6HI, P29FL, YB0ARA, YB0QC, VS6BT, VS6FL, PY2ZS, 9H1BT, SZ2DH, ZK1XT, VS6DO, LU9AEA, DU1GF, PY3BAM, KH6IAA, CX1DDO, KI6CG, KH2CY, HC5K, VS6XRC, LU3EX, PP7??, FK8EM, KH6SB, WY5L, H44GR, V85DA, VK9NS, CX8BE, CE3BFZ, plus a string of VK1,2,3,4,5,6,7,8 but no ZLs! That list represents 48 call areas in 34 countries.

SMIRK (Six Metre International Radio Klub

A letter from Ray Clark, K5ZMS of SMIRK, indicates moves are afoot in the USA via a 50 MHz FM Repeater Expansion Proposal to allow FM repeater operation in the DX window of VK stations, 52.000 to 52.100 and the ZL DX window from 51.000 to 51.100 MHz. Such a move will effectively put paid to the hopes and aspirations of a number of stations in VK and ZL to work stations in the USA.

Whether or not VK stations finally receive permission to operate Australia wide on 50 MHz has no bearing on this matter. There will be those stations within the service areas of Channel O transmitters whose only opportunity of working across the Pacific will be on 52 MHz and the moves in the USA will effectively preclude such operation. Our 52.050 MHz calling frequency is well known in the USA.

In the case of the ZL operators, at present there is no intention to allow them to operate on 50 MHz, so they require 51 to 51.1 MHz for their across the Pacific contacts. Such contacts have already been made this solar Cycle 22 and will continue to be made.

SMIRK strongly objects to the movement of the repeater sub-bands to 51 MHz if the 100 kHz segments for the New Zealand DX window at 51 to 51.1 MHz and the Australian 52 to 52.1 MHz DX window are eliminated. SMIRK says there is every reason to believe these two windows are going to be required by New Zealand and Australia for many years. With that I concur.

VK5LP is very much against any such appropriation of the six metre band. I will be stating

my opposition in a letter addressed to the American Radio Relay League, 225 Main Street, Newington, CT, 06111, USA. I will ask for my views to be distributed to Larry Price, W4RA, and the Board of Directors so they will know my position. Our geographical position on the globe does not assist trans-Pacific contacts and any wide-band operation at the US end will be a catastrophe.

Those amateurs who have sufficient interest in the six metre band and realise that some mates in Channel O service areas may be deprived of overseas contacts, should also write a letter in opposition to the proposal. May I suggest you do it now as the matter is urgent.

A few snippets of information from the last SMIRK newsletter, per favour K5ZMS and VK3AUI.

During Cycle 21, a count showed there were 114 countries with six metre operating privileges. The present count is 122. Donald Murden PY5ZBU claims to have worked 100 countries on six metres but is short of some QSLs to prove it. In Norway, 25 operating permits have been granted; in France there have been 417 applications and so far 80 granted, some denied.

VP2MO reports his beacon is on weekdays from 2000 and most of the time at weekends. Dutch authorities are issuing one year renewable licences for operation between 50.0 and 50.45 on a temporary basis ending 31 December 1993. Fred Simpson, VP8PTG in the Falkland Islands has equipment loaned by SMIRK. Finland will have 60 licences in the first issue, operating 50.0 and 50.50 and up to 200 watts SSB.

OX6OX has six metre authorisation and Saba (PJ6) should be on soon. Rigs have been sent to 9Q5NW and J52US. VP2EZ and J73PD are active. There are more than 50 ZS operators on six metres plus 3 in ZS3.

The SMIRK world wide list of six metre beacons totals 105, not all of which are in continuous operation. In addition there are numerous television video and audio channels.

Two Metres and Above

John McRae, VK5NJF has written from Nuriootpa in the Barossa Valley to pass on the news of his foray in the realm of two metres DX. Although restricted to FM he observed that the Albany repeater on 146.825 is the same frequency as their Barossa repeater and was alerted to the enhanced conditions at the end of January.

Observing VK6ZBH and VK6DM on the local repeater and anxious to work his first DX direct, John went to Menglers Hill with his FT230R with 3 watts to a 5/8 whip and spent some time before latching on to VK6ZBH. Trying again on 1/2, he worked VK5KCX via the Busselton repeater VK6RBN. Then worked VK6ZRT, but with little joy on the direct path.

Returning home, John built a 2 element quad and was able to work direct to VK6AOM, ZBH, DM, KLJ and PHL, the latter pinning the S meter while using a handheld with 1 watt to a 5/8 whip antenna. He also worked Carl VK6XW from Albany. Some strong SSB signals were heard but were not resolved on the FM rig.

It is good to see someone more or less tied to repeater operation, making the effort to work stations direct. With this indoctrination, perhaps John will now take the next step in the licence structure which will allow him to use SSB.

John VK3ZJC said two metres was open all day to Adelaide on 30/1. VK6WG worked VK3AUU, VK3UM and VK3APW on CW. VK5NY worked VK3 for several hours and included a contact to VK6WG with the beam on Melbourne. On 31/1 VK6WG worked VK2DVU at Condobolin, central NSW, a distance of 2693 km. A ZL station worked through the VK3RWZ repeater. On 1/2 VK6WG again worked VK2DVU and on 2/2 VK6WG worked VK3XRX at Bairnsdale, a distance of 2675 km.

John said 432 MHz contacts had been made to VK1BG, VK1VP, VK5NC, VK5NY, VK7ZBT and VK7DC. VK6WG and VK6YAU worked several Melbourne stations on 1/2 and 2/2. On 26/1, Geoff VK3ZGJ claimed what he feels could be a QRP record on 432. He worked Roger VK3XRS - a distance of 230 km - with 1 watt output, but signals were still so strong that Geoff put attenuators in his feedline until he was down to 1 milliwatt output. This meant of course that he had 30 dB attenuation on receive as well, but he was still able to work Roger. So he is claiming a record of 230,000 km per watt on 432 MHz!

On 1296, Danny VK3KKW has a 600 mW transverter operational and on 25/1 John VK3ZJC worked him when he had his new transverter in the car with a clover-leaf antenna a few cm above the roof. Danny noted that so far, there appear to be no claims for a 1296 mobile record.

Roger, VK3XRS has built a 50 element DL6YU beam for 1296 MHz and used it very successfully during the recent VHF/UHF Field Day. Sam, VK3ZAT has appeared on 1296 with an IC1271 and an antenna strapped to a vehicle outside his house!

John VK3ZJC, operated as a 4 band station from Mount Baw Baw during the recent Field Day Contest. Others out portable were VK3ATL on Mt. Cowley, VK3BBB Mt. Tassie, VK3XEC Mt. Toole-be-wong, VK3KKW Arthur's Seat and VK3YSP Mt. Hotham. As an indicator of the extremely poor conditions which existed between VK5 and VK3, there were six stations out portable in Victoria. Not one of them was heard at Meningie and it wasn't for the want of trying! It seems unbelievable.

On 432 contacts were made to VK7DC and VK7ZBT plus Melbourne stations. Geoff VK3ZGJ operated portable on Mt. Baw Baw but not in the field day. He had 144, 432 and 1296 and also ran an ATV transmitter on 426.25 for several hours on the Saturday afternoon. His pictures were received and videotaped by VK3ZBJ and VK3YTV. On 1296 there were ten active stations including VK7DC.

Ross VK2DVU has written about the excellent tropospheric opening he experienced on the UTC mornings of 30/1 and 3/2. On the first occasion at 2235 he worked VK6ZBH 5x4, 2240 VK6WG 5x8, 2246 VK6YAU 5x8 and at 2248 VK5ZDR 5x9. On 3/2 at 2151 he worked VK5NY 5x9, 2158 VK5ZDR 5x9, 2201 VK5RO 5x4, 2205 VK6WG 5x6, 2208 VK6YAU 5x4, 2211 VK5LP 5x9, 2215 VK6XY 5x7, 2229 VK5ACY 5x8 and 2342 VK2ZAB 5x9.

Ross said he checked the TV channels at 2100 on 30/1 and found the local Ch. 7 and 9 from Griffith rock solid, Ch. 10 from Melbourne and Ch. 5 Ballarat were full colour. After determining the direction the signals were coming from, he checked the repeaters to the south but these were indecisive due to cross-polarisation of antennas. He called regularly on 144.100 for nearly an hour with no response, so gave up and went to work. At about 2230 he was mobile between jobs when the local repeater VK2RRT opened up and VK6ZBH, almost noise free, announced he was listening. Returning home Ross knew from the excitement in Brian's voice that the contact was authentic. From home he worked Brian on 144.100 at 5x4 for a distance of 2693 km which is just short of the NSW record of 2697.9 km made on Es between VK2ZRU and VK6AOM. After working the other stations listed above, Ross thought that would be the end, possibly for many months.

For the next three days there were no signals, however, on the morning of 4/2 (3/2 UTC) Ch. 10 from Adelaide appeared. Calling to the west, Ross was answered by Roger VK5NY who was working to VK6. He then proceeded to work the other stations listed and after about 40 minutes the band closed.

Ross said his location favours the south and the west, being on the western side of a small rise with no visible hills on the horizon. Ross runs 35 watts to a 16 element phased array at 15 metres. Having now observed the full potential of his location, it seems the next step must be 432 MHz. He asked one question which I am unable to answer: Would this have been the first time a VK2 repeater was worked from VK6? Someone may be able to supply the answer.

It is notable that on the morning VK2DVU was having such fun, the VK5LP log book shows a number of good contacts apart from VK2DVU. At 2215 Mark VK3KZZ from Horsham was worked at 5x9, 2300 VK6XY Albany 5x5, 2310 VK3AOS near the Grampians 5x9, 2328 VK5AXV/3 at Kaniva 5x9 (and 5x6 on 432), 2356 VK3JBC 5x9 on 52.060. One wonders if this contact was by enhanced tropo or short skips Es - probably the former in view of the strength of the two metre signals.

The Low End of Six Metres

Apropos my letter to "Amateur Radio" and "Amateur Radio Action" regarding the use by amateurs, when not entitled to do so, of the segment 50.000 to 50.150 MHz, I wish to thank those people who have telephoned and written in support of my stand on the matter. I also wish to thank those people who have contacted me with views not entirely in line with mine, but all of whom adopted a fair and reasonable attitude towards my stand. From the reports of both camps, I gather there are many amateurs with a commonsense approach to their operating and who are generally responsible people, although some wander away from the straight line occasionally! As your Sub-Editor of "VHF/UHF An Expanding World" it was necessary for me to state my position and you all know which

side I must take. I do not propose going into a long discourse on the matter in these columns but there are a couple of points on which I wish to speak. Whilst I have no option but to support the regulations in their current form - because they are the regulations - the restrictions in VK1,2,3 and 4 which allow no operating during any Ch. O television hours, means that from Friday to Monday, no amateurs in those States can legally operate for 24 hours a day. For the great majority of amateurs, well away from the service area of these stations, this appears to be an unreasonable restriction.

It has pleased me to see the reasonable attitude taken by many of the European administrations towards amateur useage of the low end of 50 MHz, particularly as there are so many countries crammed together in a small area when compared with our vast distances.

The Federal Executive of the WIA has given me a copy of the Technical Report for the proposed shared use of 50 MHz between the Broadcasting Service and the Amateur Service, which has been submitted to DoTC in Canberra. The report consists of 20 pages and has been well researched and documented and I congratulate those involved in its preparation.

For those amateurs wanting to know what is the current position, at the moment we are bound by the present regulations, but if this submitted report is accepted then a set of reasonable operating conditions for the whole of Australia will prevail. I can only hope that approval will come while the prevailing conditions for world-wide contacts remain with us.

I wish to thank those amateurs who, since the letters, have refrained from using the segment involved. Nevertheless, it is interesting to record that with all the alleged operating on 50 MHz, I have not heard any complaints of interference, but then of course, I don't live in the eastern States. Perhaps this indicates that it is possible to operate widely on 50 MHz without too many problems!

Stop Press: On 1/3 at 0730 on 50.110 Mike VK8ZMA worked OH2TI in Finland at 5x9 both ways! Peter VK8ZLX almost missed out but did work OH2TI at 0827, he sent 4x1 and received 5x5, a few moments later the band closed. Peter said there was television on 48.250 at the time. Here at VK5LP 50.110 was open to Japan for most of the day. Congratulations. Who will be next?

Closure

As I conclude these notes at 0130, I can hear on the transceiver behind me, that JAs are on 50.110 MHz again, for the fifth day in a row. As usual, they are being worked by Hughie VK5BC.

I hope the next two months will provide some outstanding six metre contacts from around the world as we go into another equinox peak for F2 propagation.

Closing with two thoughts for the month: "An expert is a man who doesn't know all the answers, but is sure that if he is given enough money he can find them" and "Just because a rumour is idle doesn't mean it is isn't working".

73. The voice by the lake.

5/8 WAVE

April 1989

Many New Members

Jennifer Warrington VK5ANW

I am pleased to welcome the following new members all of whom joined between July and December 1988.

Mr G L Read	VK5PA	(G)
Mr R J Allen	VK5NAV	(F)
Mr AG Allwright	VK5IA	(F)
Mr AW Stringer	VK5ZCJ	(F)
Mr AT Harris		(A)
Mr IL Smith		(A)
Mr JE Brown		(A)
Mr CE Hobbs	VK5BCE/VK0CEF)	
Mr WG Richardson-Johnson	VK5ZG	(F)
Mr J Berka		(A)
Mr JS. Orlando		(A)
Mr KD Roper		(F)
Mr J G Wilhelm	VK5ZKW	(F)
Mr EWRH De Young	VK8XX	(F)
Mr K J Lancaster		(A)
Mr J E Sawes		(A)
Mr W Vogel	VK5NVW	(F)
Mr Y Slovachevsky	VK5ZYS	(F)
Mr I R Finch		(A)
Mr G R Dawe		(A)
Mr.P C T Cawthorne		(A)
Mr P W Parker		(A)
Mr W N Thomas	VK5VE	(F)
Mr W J Kilpatrick	VK5KWK	(F)
Mrs C C Haworth	VK8NCH	(F)
Mr E Vantijn	VK5AAG	(F)
Mr K J Glasson	VK8KG	(F)
Mr J H Moore	VK5AME	(F)
Mr.K WH. Perry	VK5AAF	(F)
Mr T Itagaki	VK5AFG	(F)
Mr C Richards	VK5ZPF	(F)
Mr P J Spaninks	VK5APJ	(F)
Mr I H Ritson	VK5NIR	(F)
Mr J B Hollet	VK5JK	(F)
Mr R M Baker	VK8KGV	(F)
Mr F R Roddam		(A)
Mr W Klompenhouwer	VK5ZDL	(F)
Mr I N Cousins	VK5IK	(F)
Mr G R Tootell		(A)
Mr N G Govan	VK5CMJ	(F)
Mr C F Johns	VK5ACJ	(G)
Mr K C Young	VK5AKY	(G)
Mr S Jovanovic	VK5KSJ	(F)

We hope that you will have a long and happy association with the WIA.

Diary Dates.

Friday 7th - Sunday 9th April - Clubs' Convention at Aldinga Beach

Tuesday 25th April - No WIA meeting (Anzac Day holiday)

Tuesday 2nd May - The Annual General Meeting (held over from the 25th April)

12th - 21st May - Display Station at the International Expo at Wayville. (have you put your name on the roster?

ar

FORWARD BIAS

Committee Changes

Norman Gomm VK1GN
19 Krichauff St
Page ACT 2614

New Committee

At the February meeting the members of the ACT Division elected the following office bearers.

President	Ted VK1AOP
Senior Vice President	Kevin VK1OK
Vice President	Alex VK1ZDX
Secretary	Jan VK1BR
Treasurer	Ken VK1KEN
Federal Councillor	Kevin VK1OK
Members	Neal VK1KNP
	Paul VK2CJ
	Norm VK1GN
	Carl VK1KCM

Our New President

Ted, VK1AOP, is no stranger to office within the Division, having previously held the offices of President and Vice President back in the seventies. He currently operates our Outwards QSL Bureau, and has done so since its inception.

Our new President has been interested in radio since he was a boy of nine. He sat for his first licence in 1952 and obtained one of the original issue Z calls - VK2ZAP.

Girding his loins, Ted then tackled the dreaded morse code exam and to his surprise passed the test. DOC equally surprised issued his full call VK2AOP which he later traded in for VK1AOP.

Ted was involved with the formation of the Canberra Radio Club, to be followed by the Canberra Radio Society where he served as Treasurer, Secretary and President.

When the ACT Division was formed Ted played an active role in its development. He has also served as Convention Secretary for the 1958 South Western Zone Conference in Canberra.

Ted's main Ham radio interests are DX, RTTY, VHF mobile, Field Days and awards. Other interests include golf, photography and genealogy.

He has degree level qualifications in electronics and computing.

Formerly a public servant, Ted retired in 1983 (lucky sod). On behalf of the Division congratulations to Ted on his appointment.

Classes.

Classes for both Novice and Full Call licences will be underway shortly. Bob May VK1BM has volunteered to run the classes and if you are interested please contact Bob.

ar

DATA AND DIGITAL COMMUNICATIONS

New Column

Brian Beamish VK4AHD
AsiaNet Coordinator
SysOp VK4BBS PBBS
35 Chester Road,
Eight Mile Plains, Qld. 4113

Welcome to YOUR new bi-monthly column, one that I am sure given your support will prosper, improve and be here for a long time.

The intent of this column is to endeavour to cover all modes and aspects of digital and data communications including computer software and terminal hardware etc.

Modes covered will include: RTTY, AMTOR, ASCII, FAX, Digital Signal Processing, Packet, TCPIP and digital voice and picture transmissions, Satellite digital communications & PSK etc.

Whilst this bi-monthly column will generally be around a page in length, there will be technical and specialist items from time to time that will go into several pages.

As my expertise these days is largely in Packet and as a BBS Sysop my own articles will be largely biased towards Packet.

I am aware of many amateurs who are far more experienced in data and digital communications and in the other modes than I am.

Most of these operators would be capable of writing articles on one or more of the modes mentioned above, I appeal to these operators to please support this column with either short or long articles, hints and tips etc etc.

Whilst appealing to operators to write articles etc I would also really appreciate hearing from you the reader as to what you would like to see here; maybe you have problems with your particular mode, have problems with a Packet or Amtor BBS etc. getting that software to run, getting that terminal unit running with a Model 15 Teleprinter or a TNC with your particular computer and would you like to know all about TCPIP or what the difference is between AFSK, FSK, PSK and MSK etc. etc.

Well this colum is for you, let me know what you want and I will do my best to get it for you.

It is intended that where suitable and possible that about two weeks after the column and articles appear in Amateur Radio some will also appear on the Packet Radio BBS Network, less of course any photos or diagrams etc.

Consequently it is highly recommended that you join the WIA to get your monthly copy of "AR" to obtain these.

As this is only a rushed initial introduction to this new column (I leave on holidays in a couple of days) I thought I might give you a list of some of the clubs and individuals that I personally know would only be too pleased to assist you. Unless otherwise indicated all addresses are as per the current call book.

RTTY & AMTOR

Australian Amateur Radio Teleprinter Group Inc (AARTG)
12 Selway Rd, Brentwood, WA, 6153
Australia National Amateur Radio and Teleprinter Society (ANARTS)
PO Box 860, Crows Nest, NSW, 2065
Queensland Amateur Radio Data & Teletype Association Inc. (QARDATA)
PO Box 184, Fortitude Valley, Qld, 4006
Packet and TCPIP etc.
Melbourne Amateur Radio Packet Group (MARPG)
P.O. Box 299, St. Albans, Vic., 3021
Australian Amateur Packet Radio Association (AAPRA)
59 Westbrook Avenue, Wahroonga, NSW, 2076
Queensland Digital Group Inc (QDG)
PO Box 2224, Chermside Centre, Brisband, Qld, 4032
Amateurs I am sure would help include:
VK2OP, VK2SG, VK2AGE, VK2EHQ, VK3AVE, VK3BSR, VK4WZ, VK4AFA, VK4FEA, VK4KJB, VK5AEI, VK6AGC, VK7AE (VK7BBS), VK8BBS, ZL2AMD.
Satellite Digital Communications:
AMSAT-VK .... Graham VK5AGR Coordinator
C/o P.O. Box 2141, Adelaide, SA, 5001
AMTOR to VHF Packet Mail Boxes in VK include:
VK2AGE VAGE Gordon
VK2EHQ VEHQ Peter both on 20m
RTTY BBS in VK:
Whilst I am aware that they are around I have no information on them.
Open User accessible PACKET HF BBS in VK include:
On 14.107 VK2EHQ, VK7BBS, VK4AGF, VK8BBS
On 10.147 VK2EHQ, VK2OP, VK3AVE, VK3BSR, VK7BBS, VK5AEI, VK4FEA
On VHF Packet BBS in your area will be found around either 144.900 or 147.575.
VKnet Coordinator is Peter Boskos, VK2EHQ, RMB 3120, George Downs Drive, Kulnura, NSW, 2251
AsiaNet information can be obtained from the coordinator, Brian Beamish, VK4AHD, 35 Chester Road, Eight Mile Plains, Qld., 4123
If you wish to write to me personally with your articles, suggestions or questions please do so at the above address. Your cooperation and assistance is sought to make this column the success that it should be .....

EDUCATION NOTES

Volunteer Effort

Brenda Edmonds, VK3KT.
PO Box 883
Frankston, 3199

A comment was received recently implying that some of the volunteer work carried out by members is not given due recognition. I wonder if this feeling is general.

In a time when society is putting increasing pressure on our limited leisure time, are we alienating some of our dedicated workers by appearing to ignore their contributions?

Are we giving due credit to those who are running classes, CW practice nets or coaching sessions to help newcomers enter the hobby. It may not be only the 'educators' who need more credit.

Most volunteer organisations are perpetually short of bodies to do the constant, day-to-day jobs. Office bearers will be found, either those who seek office for personal reasons or those who take on a position in order to keep the organisation running, but too often the work is then left to this group.

The WIA is no exception. Most Divisions, Zones and Clubs are run by the dedicated few, and the rest are happy to leave it to them, even though that few have no more time to spare than the rest. But some of the rest are quick to complain when the decisions of the management group do not suit.

Channels are available for all members to make their views known to the decision makers, but these channels are rarely used as much as they should be.

An interesting 'side effect' of the survey last year was the number of members who added comments on various aspects of amateur radio. They used a new channel. Without it, would they have made the effort to correct or improve some situation about which they felt strongly? Without it, we may have been still unaware of many views and ideas which we have been happy to receive. Perhaps there is a need to provide regular formal opportunity for this type of feedback.

The WIA relies very heavily on volunteer assistance at all levels - Executive office, Divisions, Zones, Clubs and individuals. Volunteers run Divisional Offices, classes, club nets, Conventions, bookstalls, fox hunts and White Elephant nights. They look after QSL Bureaux, Intruder Watch, repeaters and beacons, awards, contests and distance records. They provide service to members having trouble with town planning regulations or interference, and information about satellites and equipment. They comprise advisory committees and working parties, and provide liaison with a range of other bodies.

In many cases, their work is unrecognised because members are genuinely unaware of the amount of work involved in, say, preparing discussion papers for a WARC or an IARU Conference, or negotiating with DOTC for changes in privileges. In other cases members may not know of the services being provided. Dedicated groups are running regular on-air Morse practice sessions at times to suit those who cannot use the evening sessions. Others are coaching students on an individual or small group basis. Still others are taking amateur radio out to community groups, schools or local Festivals.

We owe a great debt to these people who have seen a need or an opportunity to further the cause of amateur radio, and have quietly gone out and done something about it without looking for personal reward.

It is not possible to keep track of all these people to acknowledge these debts individually, but two courses are open. Those on the receiving end can show their appreciation at the time, and we who benefit from the service or from the recruiting of new members can in turn contribute to encouraging newcomers.

Amateur radio has a long tradition of the senior operator helping the new. It is sad if assistance given is not acknowledged until the time comes to produce an obituary notice.

To all those 'invisible' workers, we are appreciative of your efforts, and do realise how important your contributions are. How about letting us know more about them? Perhaps some of those being helped could write a few lines for AR on the services being provided, and a short profile of the amateurs behind them.

A further acknowledgement could be some sort of 'service' award to those who are shown to have given so generously of their time and talents.

We certainly cannot afford to appear to neglect their contributions. We would be very happy to see more members following their example.

Three cheers for the Volunteers.

Brenda M. Edmonds, VK3KT
Federal Education Co-ordinator.

CONTESTS

Contest Calendar

Federal Contest Manager
Frank Beech VK7BC
37 Nobelius Drive
Legana 7277

April		
12-14	YLRLDX/YL to N Am YL CW contest	
19-21	YLRLDX/YL to N Am YL SSB contest.	
29-30	Swiss	Helvetia contest.

The column for this month is devoted to the 1988 Remembrance Day contest. Next month will include the results of the 1988 Ross Hull contest and the VHF/UHF field day contest that was held in January 1989. When placed "side to side" these results will prove to be most enlightening and will, I hope, indicate what path should be taken to lift the participation in VHF/UHF contests.

Remembrance Day Contest 1988 Results

Congratulations to the VK4 Division. Winners once again.

The entries received for this contest are all listed in the results, and any amateur who cannot find his/her entry in the following lists can be assured that the log did not arrive at this address. I was very pleased that no entry was disqualified and only a small number of logs contained undetected duplicates, none of which caused me to apply the disqualification rules.

A total number of 544 entries have been checked, and of these almost 160 for the VHF section makes one wonder why our VHF only contests can at best only attract a handful of entries. Thanks must go to Bill ZL4QY for a useful check log of CW operations, and to VK2KZ for sending in a nice log. 2KZ has been licensed since 1929, "thanks old timer".

Comments from Competitors

Comments; Why no transmitting "all bands category"? Please consider the modern amateur station complete with logging computer ..... whether full, combined or novice calls! The VHF bands are empty of stations that can be reworked" so the RD contest entrant runs up the HF rig ..... but the computer says you have already used up serial number 001 on VHF ..... and won't let you re-allocate it on HF!

Run a separate log program under another name? OK, do that! there is a brief lull on HF and a few callsigns appear on VHF that you can work again quickly ..... what do you do?? Computers and mass storage devices might be quick but it is hard enough to type in the data without the worry of which log you are in, or reloading the other log system to grab a few quick calls! Be realistic - an "all bands" category is the only reasonable answer.....VK4ADC.

Enjoyed the Friendly spirit, numbers down? .....AX prefix didn't seem to be much favoured, at least within VK. Glad of the chance to contact so many gentlemen and to remember the good old days from September 39 to August 45 .....Lest we forget .....VK4IS. Best remembrance contest to date, with good fellowship and total lack of unpleasantness...VK4AGL.

I enjoyed this year's contest once again. I found the operators very friendly and good operating. Was good to see the contest mentioned in our "Break in" on the calendar plus a set of rules. It would be good if the results were also sent to "Break in" for publication. I entered last year's contest but there has been no word out here of the results .....ZL2ADN.

There will be this year ...FCM.

I guess contesting is not everybody's cup of tea, and indeed this is my one and only contest for the year,. and only my third RD. I think it is trite to say, however, that everyone comes out of the woodwork to participate in our "Day of remembrance", our "Anzac day of the air", so to speak. I even had a contact from FK8GA, George, wanting to know about the significance of the day and Dick FH5EF ventured to give me 59003. I wonder who got 001 and 002 .....VK4BAY.

At the start of the contest I found the going rather slow compared to previous years, however, this was to change during the remainder of the contest with a new high score of 654 defeating my previous best of 651 in 1986. I attribute this to the minor openings on 10 and 15 metres on Sunday ..... In all I enjoyed the contest and hope to do better again next year .....VK2KL. Don't we all.....FCM.

I must thank Philip VK1PJ for the very constructive letter and comments regarding multiple callsigns and signal reports. These have been noted and will receive much thought before we print the rules for the 1989 contest. FCM.

Divisional Scores

VK1		VK5	
HF Phone	2720	HF Open	1612
VHF Phone	391	HF Phone	7559
Total score	3111	HF CW	1067
		VHF Phone	2487
		Total score	12725

VK2	
HF Open	878
HF Phone	5668
HF CW	2002
VHF Phone	29
Total score	8577

VK6	
HF Open	970
HF Phone	6129
(includes Xmas Isd	307)
HF CW	1228
VHF Phone	4460
Total score	12787

VK3	
HF Open	694
HF Phone	3657
HF CW	1724
VHF Phone	1666
Total score	7741

VK7	
HF Open	652
HF Phone	1856
HF CW	954
VHF Phone	911
Total score	4373

VK4	
HF Open	719
HF Phone	6610
HF CW	1618
VHF Phone	3279
Total score	12226

VK8	
HF Open	200
HF Phone	627
HF CW	134
Total score	961

Overseas Scores

VK9QR Christmas Is HF Phone	307
ZL1AAS HF Phone	503
ZL1BVK HF Phone	406
ZL3KR YL HF Phone	212
ZL1IM HF Phone	189
ZL2ADN HF Phone	180
ZL3ABC HF Phone	104
ZL4GB HF Phone	59

Receiving Section Results

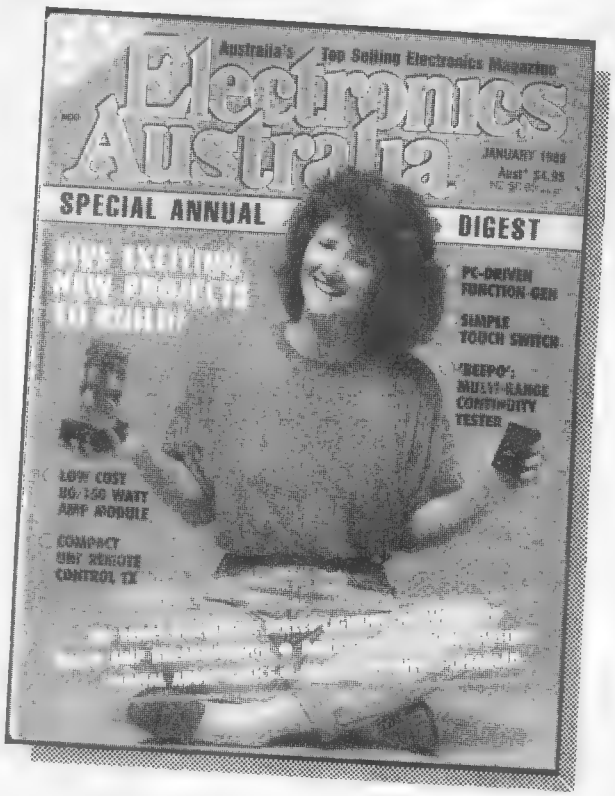
L50189 C. Edwards SA	415
L60036 P. Dean WA	285

Individual Scores by Division

VK1	HF Phone	VK1	VHF Phone
VK1PJ	718	VK1DI	78
1RJ	406	1RG	50
1TD	319	1DW	48
1ZL257		1ZAR	46
1BEB	252	1TD	29
1RG	201	1MX	29
1DW	127	1ZL	28
1RH	120	1RH	25
1MX	92	1BAT	22
20E/1	60	1ST	15

Fifty years of electronics publishing:

Electronics Australia: 50 years old this month



Fifty years ago this month, a new monthly radio magazine appeared on the Australian news stands – *Radio and Hobbies*. It went on to become an established part of Australian radio and electronics publishing, with many famous amateur radio projects described in its pages over the following years.

Nowadays, of course, the magazine is called *Electronics Australia*. And this month's issue is a very special one, to celebrate our 50th Anniversary. Apart from anything else, it's the largest issue we've ever produced – with no less than 260 pages.

Inside there are all sorts of special articles, reviewing what has happened to both radio/electronics and the magazine itself over the last 50 years. Articles on Australia's radio pioneers; on the way the radio, hifi and consumer electronics industry has grown, from the first battery radios and gramophones; a review of the classic amateur radio and hobby projects we've published over the years; articles looking at the development of transistors, integrated circuits and computers; a special article on Australia's role in the development of radio astronomy; and an attempt to predict what might happen in the NEXT fifty years...

And if that's not all, there's also a special souvenir reproduction of our original April 1939 issue, attached as a bonus to the front of the issue – just to show what things were like when we began!

All of this is in addition to our normal articles, construction projects and features. There's a special article on current developments in satellite TV reception, for example, plus the first of two articles describing how to make a replica of the Ruhmkorff induction coil used in early spark transmitters.

Don't miss out on this special 50th Anniversary issue, which is undoubtedly a milestone in Australian electronics publishing history. We expect it to be a sell-out, so a delay in picking up YOUR copy at the local newsagent might lead to disappointment!

Australia's top selling electronics magazine!

1DI	42	1LF	11
1ADQ	26	VI88ACT	10
VI88ACT	11		

VK2	HF Open	VK2	HF Phone
VK2BO	553	VK2ZZX	29
2HQ	139		
2MUZ	80		
2BLK	60		
2AIC	46		

HF Phone				HF CW	
2KL	654	2NV	54	VK2BHO	276
2ZL	429	2BMX	52	2AQF	264
2BTP/P	413	2OH	50	2DQP	248
2BAM	357	2VR	48	2FCO	232
2PD	354	2SP	40	2AZR	160
2AOA	297	2KA	40	2EL	134
2XT	284	2PY	40	2BRA	132
2PS	267	2KGX	38	2II	124
2DWT	225	2DDW	33	2CWS	80
2RF	222	2PJT	30	2GT	76
2AGF	206	2JCL	29	2QL	76
2ARG	187	2AJO	25	2ED	74
2WI	180	2ETF	24	2JM	58
2DQP	151	2RX	23	2ARZ	54
2CJH	151	2AYF	20	2RJ	14
2DFL	150	2DOJ	19		
2PN	130	2AMM	15		
2AYK	126	2CH	14		
2DJJ	83	2HJ	12		
2KZ	62#	2CF	10		

VK3 Open				HF CW	
VK3ER	225			VK3CQ	330
3AUQ	218			3KS	228
3DNC	164			3CX	201
3XF	87			3BDH	130
				3CIM	122
VK3	**HF Phone**	VK3DKT	104	3DG	122
VK3AJU	498			3CAX	94
3BSH	454	3ATJ	100	3FC	81
3APC	260	3KT	85	3DID/grp	70
3ALZ	247	3GV	73	3JI	54
3EWD	210	3PTR	61	3KF	40
3SM	153	3DVT	53	3AMP	34
3CAY	152	3AMW	52	3FA	24
3PJB	148	3CAP	52		
3CEE	147	3DBK	49		
3ABP	137	3AOS	40		
3BRZ	116	3KTO	31		
3CDH	110	3DYF	14		
3AJG	106				
3AJG	106				
3ADW	105				

VHF Phone

VK3TAY	246	VK3XMW	58
3APC	182	VI88WIA	50
3AVV	173	3XH	44
3ZJC	166	3BH	43
3CAP	128	3BMV	40
3GV	106	3KTO	37
3XBA	100	3KT	32
3CLS	93		
3SM	89	3ER	28
3DNM	80	3AOM	13
3DKT	58		

VK4 HF Open		HF Phone			
VK4YG	388	VK4BTB	479	VK4BNL	80
4QI	202	4JQ	380	4AVR	75
4LT	69	4DO	350	4CA	75
4VAT	60	4BAY	335	4BG	72
		4AEV	328	4KB	68
HF CW		4AQD	282	4CEM	65
VK4XA	406	4AGL	270	4BIF	66
4CAG	300	4AEM	225	4OD	64
4JH	246	4YZ	224	4NMA	60
4BRZ	118	4AOE	185	4RE	50
4CEU	98	4BTW	180	4RL	50
4BIL	90	4KEL	163	4PS	49
4SF/grp	48	4IS	155	4BRG	49
4XJ	44	4ASF	147	4BSH	41
4XX/mm	42	4NEF	137	4ES	41
4QY	30	4CPL	135	4EV	37
4TT	24	4ANJ	129	4YZ	36
		4VR	125	4WY	35
		4QF	123	4LP	34
		4ACW	122	4AGP	33
		4WIZ	111	4CZ	30
		4CMA	112	4BKW	30
		4PT	106	4ADC	23
		4YN	90	4JCS	22
		4NUI	90	4BAV	22
		4RM	85	4MEH	18
				4BPD	15
				4NNN	12

4APG	90	4ADB	21		
4ZDV	67	4SL	20		
4AG	62	4RX	17		
4BNL	61	4LG	10		
4KLA	61				
4KJE	60				
4KCA	54				
4KZA	54				

VK4 VHF Phone

VK4ALE	306	4PJ	54
4WIZ	226	4ANN	51
4ZBV	222	4AIZ	47
4KAP	170	4YAF	38
4ZSS	166	4EV	38
44AVR	156	4BAW	32
4NLV	142	4AOK	36
4VR	137	4KE	33
4NEF	136	4BAW	32
4YAN	132	4KJR	32
4ZML	109	4XPO	26
4AHO	107	4KAC	26
4ZXZ	106	4KLC	24
4IY	100	4GT	23

VK5 HF Open		HF CW	
VK5AYD	685	VK5ATU	403
5GZ	368	5UY	200
5LZ	320	5MN	126
5BMT	142	5AO	118
5TL	62	5AF	92
5EA	35	5HO	74
		5JG	54

HF Phone						VHF Phone	
VK5QX	698	51J	108	5LL	29	VK5KCX	319
5ADD	577	5TP	104	5ANW	29	5AKK	310
5EN	554	5UE	96	5BF	29	5ZBK	259
5ATN	450	5NF	91	5KTY/p	26	5PC	148
5ARN	401	5ZE	90	5AAS	25	5OR	139
5XY	377	5ZE	90	5YK	25	5YME	121
5BAR	305	5ST	85	5ZJ	22	5RV	110
5ATC	260	5KV	80	5XC	17	5OZ	110
5KGS	213	5BVJ	80	5LC	14	5AKK	104
5BI	202	5BFB	71	5KJT	13	5XY	100
5OV	183	5QW	70	5OU	12	5KTY	91
5AJK	168	5GN/m	67	5NEI/p	10	5NVW	82
5ARC	167	5BWF	61	5YJ	10	5ANW	80
5AX	165	5QP/m	60			5AVQ	66
5RV	158	5ACW	50			5ZTJ	63
5OR	152	5AQ	50			5ZKK	50
5APJ	147	5RK	46			5AOV/p	39
5PC	145	5AOV/p	44			5RR	33
5WO	132	5ZD	45			5OU	19
5GV	123	5EJ	35			5GN/m	18
5NVW	122	5TW	34			5GN/m	18
5APD	120	5AGB	30			5QP/m	16

VK6 HF	Open	HF CW	
VK6ED	389	VK6HQ	352
ANC	290	6AFW	294
6HT	225	6AJ	240
6JK	66	6SM	126
		6RF	124
		6RU	64
		6GA	28

HF Phone

VK6AYO	515	VK6NAZ	46
6BSE	431	6HK	46
6DE	401	6UT	40
6AO	261	6KH	40
6AEA	257	6SH	37
6ATZ	245	6GL	37
6NTJ	230	6GGN	23
6AMB	229	6BMW	23
6JP	200	6BRK	35
6XQ	197	6UW	35
6APK/p	172	6BO	31
6WC	162	6AAL	31
6ALD	161	6OE	30
6BRN	160	6BMV	27
6PHL	150	6ANT/p	21
6TO	150	6HM	20
6JP	146	6DA	20

VHF Phone

VK6ZLZ	275	6AMB	53
6WH	248	6AN	45
6ZPP	215	6WC	
6ABR	195	6WIA	43
6YF	188	6AR	40
6AD	178	6QN	40
6XQ	178	6YJ	30
6AO	163	6WT	28
6CX	163	6RU	26
6TO	160	6YL	26
6TX	154	6DC	24
6KWN	148	6APK/m	17
6HM	140	6EB	16
6SH	135	6HT	16
6NE	100	6RZ	16
6UT	100	6VH	15
6AP	99	6ZGA	14

6FC	125	6LI	19	6HU	95	6NWA	12
6FP	105	6VF	16	6FC	95	6RRG	13
6AP	101	6MM/p	16	6ANC	93	6PHL	10
6RU	86	6EF	14	6AEA	93		
6VS	78	6JMP	14	6RO	90		
6IG	72	6OV	12	6TX	88		
6PAY	74	6EB	12	6MP	87		
6YF	71	6ABR	12	6SAA	84		
6CR	72	6RO	12	6GGN	78		
6QN	67	6IV	10	6SGS	76		
6SAA	64			6NRN	62		
6SCS	56			6BO	59		
66MK	54			6ANI	55		
6KWN	51			6ZLT	54		

VK7 HF Open

VK7KR	355
7BC	297

HF CW

VK7CH	236
7RO	226
7RY	182
7KA	128
7FN/qrp	64
7VV/qrp	64
7GB	54

VHF Phone

VK7ZTA	240
VK7GL	130
7ZRR	106
7NWR	97
7RM	87
7ZBW	75
7ZJG	40
7LS	27
7BA	28
7JK	14
7PV	10

HF Phone

CK7KZ	569	7AL	60
NCP	313	7SFB	40
7CK	259	7HW	20
7NXA	156	7BJ	36
7JK	98	7RM	30
7NWR	91	7JP	25
7NIM	71	7BM	15
VI88TAS	63	7LS	10

VK8 HF Open

VK8PK	200

VK8 HF Phone

VK8DA	592
8NW	35

VK8 HF CW

VK8HA	134

The formula for determination of results for each division is:

Number of logs/Number of licencees (participation) x Total points x Weighting factor (average of last four weighting factors).

Weighting factors to be applied for 1988 contest.
VK1 1.03, VK2 6.73, VK3 5.46, VK4 5.67, VK5 1.45, VK6 1.68, VK7 2.47, VK8 11.46

VK1. 26/401 x 3111 x 1.03 = 207.762
VK2 62/5409 x 8577 x 6.73 = 661.640
VK3. 64/4923 x 7741 x 5.46 = 549.464
VK4. 112/3008 x 12226 x 5.67 = 2581.113
VK5. 93/1822 x 12725 x 1.45 = 941.803
VK6. 120/1627 x 12787 x 1.68 = 1584.423
VK7. 37/584 x 4373 x 2.47 = 684.328
VK8. 4/205 x 961 x 11.46 = 214.887

Results in Numerical Order

1st	VK4 div.	2581.113
2nd	VK6 div.	1584.423
3rd	VK5 div.	941.803
4th	VK7 div.	684.328
5th	VK2 div	661.640
6th	VK3 div.	549.464
7th	VK8 div.	214.887
8th	VK1 div.	207.762

Licences per Division at September 1988

VK1.	401
VK2	5409
VK3	4923
VK4	3008
VK5	1822
VK6	1627
VK7	584
VK8	205

HAVE YOU SIGNED UP A NEW MEMBER THIS MONTH?

Sangster Shield Contest

Presented to the amateurs of New Zealand by Mr R Sangster in 1927, the Sangster Shield is for annual competition to be won by the most efficient station. In this respect it should be pointed out that in addition to the efficiency of the transmitter itself, the efficiency of the operator is of the utmost importance. To win this contest marks an operator as one who not only knows how to obtain the most output from low power but also as one who is most proficient in the art of telegraphic communication.

Rules

1. When? May 6-7 between the hours of 8pm and midnight on each day. The maximum period of operation will be eight hours.

2. Power: To compete for the Sangster Shield the output of the transmitter must not exceed 5W.

3. CW to CW contracts only are permitted.

4. All operation must be in the 80m band.

5. (a)Contacts with any one station permitted each hour, based on "even hour" basis –eg. 2000 to 2100 etc, etc.
   (b)It is not permissible to QSO the same station "twice running", eg, at the end of one hourly period and at the beginning of the next. A different station must be contacted before the "same" station is contacted again.
   (c)Except that this is permissible when one of the two stations concerned has contacted a different station between QSOs or when there is a time delay of at least five minutes between the contacts.

6. All ZL entrants must be financial members of NZART.

7 All Radio Regulations must be ovserved.

8. In the event of any dispute, the ruling of the Executive Council will be final.

9. Logs:
   (a) QUARTO or A4 size paper – preferably NZART log sheets.
   (b)Data in this order; date, time, call of station contacted, serial sent, serial received, points claimed.
   (c) ON SEPARATE SHEET a summary to show:

(i) Call sign, name and address in BLOCK LETTERS;
(ii) Number of contacts with stations using 5W or less;

(iii) Number of contacts with stations using 6W or more;
(iv) Number of contacts with overseas stations using 5W or less;
(v) Number of contacts with overseas stations using 6W or more;
(vi) List of different Branches worked with number and name of the Branch in order as given in the Call Book, together with the callsign of the station claimed as a multiplier for that branch;
(vii) Total Score – (total points and different branches);
(viii) Description of equipment used and POWER used;
(ix) Declaration that all contest rules have been observed.
(d) UNDERLINE each new Branch claimed as a multiplier. (Underline all entries for that QSO.)

10. CYPHER SYSTEM:
(a) RST followed by Branch number followed by power output –eg, 569/11/04. This would indicate a 569 report; Branch 11; and Power of 4W. Power will always be given as TWO figures – over 100W will be given as 99 while below 10W will be preceded by 0.
(b) Overseas stations give RST plus power but must receive the full cypher from the ZL station.

11. SCORING:
(a) ZL to overseas with power given as 5W or less – 20 points.
(b) ZL to overseas with power given as 6W or more – 10 points.
(c) ZL to ZL with power given as 5W or less –5 points.
(d) ZL to ZL with power given as 6W or more – 1 point.
(e) Overseas using 5W or less to ZL with power given as 5W or less – 10 points.
(f) Overseas using 5W or less to ZL with power given as 6W or more – 5 points.
(g) Overseas using 6w or more to ZL with power given as 5W or less – 3 points.

FINAL SCORE is total of points multiplied by number of different NZART Branches contacted.

NOTE: Contacts with a contestant's OWN Branch are OK for QSO points but NOT as a multiplier.

12. Mobile or Mobile/Portable operation is not permitted. The station must be operated from a fixed location for the duration of the contest.

13. AWARDS;
(a) **Sangster Shield:** to the highest scorer using 5W output or less;
(b) **Transistor Trophy:** to the highest scorer observing the rules as enumerated, but in addition who has been licensed for 12 months or less. Entrants must give Operator's Certificate number together with date of issue;
(c) Certificates to the first three contestants using 5W or less, similarly to "newly licensed" entrants;
(d) Certificate to contestant using over 5W with the highest score made from QSOs with stations using 5W or less;
(e) Certificates to Overseas stations to the highest scorer in any call area.

14. Logs must be posted to reach the Contest Manager, ZL3KR, 4 Exton Street, Christchurch 5, on or before June 2 1989.

15. To give QRP Contestants a fair chance (particularly with DX station) higher power stations are requested to operate ABOVE 3530kHz.

NOTE: Your comments would be welcome on a suggestion that the contest be from 8pm to 11pm each day.

■■

QRM from VK7

The following is a list of Office Bearers who were elected to serve for 1989, by the members of The North-West Branch W.I.A. at their AGM held on 14th Feb, 1989.

President	Greg Stammers	VK7ZBT
Vice President	Arthur Trevaskis	VK7SE
Secretary	Andrew Hay	VK7ZHA
Treasurer	Bruce Marshall	VK7MB
Repeaters	Andrew Perkins	VK7ZAP
QSL Bureau	Steve Bush	VK7EQ
WICEN	John Duncombe	VK7ZPT
Mag. Pubs.	Terry Mc Mullen	VK7BV
Stores	Robert Gore	VK7KAB
Publicity	Ron Churcher	VK7RN
Repeater 3 Officer	Arthur Trevaskis	VK7RN
Broadcast Officer	not filled	
Activities Officer	not filled	

QSL

QSLs of the WIA Collection

Ken Matchett VK3TL,
PO Box 1,
Seville Vic.3139

K5AM

Although at first glance this QSL may seem to have a Stateside call-sign, it is in fact, an early Panama Canal Zone QSL. After the historic 1927 Washington Conference which really gave international recognition to the amateur fraternity, the system of official prefixes enabled the nationality of calls to be easily identified. The prefix K5 was allocated to the Panama Canal Zone, an American possession. There were other K prefixes too, such as K6 for Hawaii and K7 for Alaska. These prefixes were not used on the American continent, the only prefix used there being W. The QSL shown here, K5AM is dated October 1933 and was sent from a United States signal unit stationed at Fort de Lesseps. The Frenchman Ferdinand de Lesseps will be remembered for his successful Suez Canal enterprise but he was also the designer of the Panama Canal. His early attempt at building the Panama Canal proved to be a failure, due partly to disease which struck down his workers but also because the rock of Panama proved considerably more difficult a problem than the sandy soils of Egypt. His company went into liquidation, he himself ending up in prison.

The canal, which joins the Caribbean and the Pacific Ocean, was opened to commercial vessels of all nations on 15 August 1914. It was a miracle of engineering. Excavation started in 1904 and continued ten years until nearly 200 million cubic metres of rock were dug-out, the work force being 35,000 men. The strategic importance of the Canal was well recognized especially by the United States; it cut the journey around Cape Horn by over 11,000 km.

It was the treaty of 1903 with the Republic of Panama which established the Canal Zone, later to become generally known as the Panama Canal Zone. This treaty gave the US the right to build and operate the canal and all the rights in the canal zone (an area of land approximately eight km on both sides of the waterway) that it would exercise if it were sovereign territory of the US In later years this led to dissatisfaction by Panamanians who judged that the treaty had been an injustice. In 1977 a new treaty legally abolished the Canal Zone and created an entirely new relationship between Panama and the US, Panama exercising its right of sovereignty within the former territory.

NY2AE

Although the K5 prefix had been officially assigned to the Canal Zone, the NY prefix continued to be used for some time. It was not an officially allocated prefix but was derived from the prefix N which certain amateur stations operated by members of the US Naval Communications Reserve were authorised to use. Even after the war NY4 prefix was assigned to US Naval Reserve personnel at Guantanamo Bay. The prefix had nothing to do with the N prefix allocation to U.S. novice licensees. The NY2AE QSL was from the US submarine base at Coco Solo (at the entrance to the Caribbean) and is dated March 1936. This was a station call operated by at least six USN operators using a 700 watt transmitter. The Canal proved of great strategic value especially during WW2. After the war the US made the decision to maintain sizeable fleets in both the Atlantic and Pacific Oceans, a decision influenced by the fact that the three locks of the canal and other constructions were regarded as very susceptible to enemy attack and sabotage.

KZ5LAND

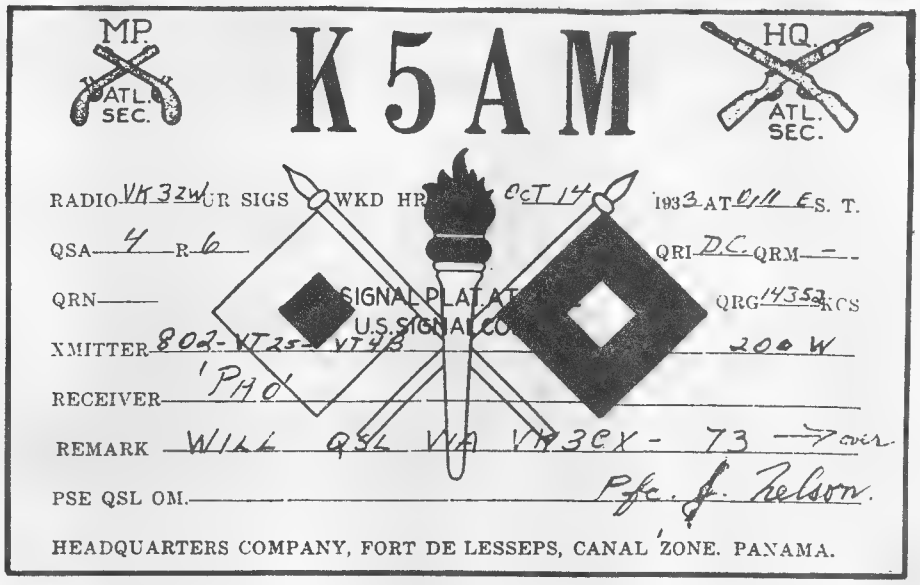
The K5 and NY prefixes were replaced by KZ5 after WW2 in the post-war DXCC list of countries which saw extensive prefix changes to US possessions. The suffix of this QSL is

interesting; there was a time when the suffix for amateur station calls had to be confined to two or three letters but recent years have seen a change. The QSL KZ5LAND is a special commemorative QSL celebrating the 50th anniversary of the "Panama Canal - Crossroads of World Commerce" and is dated October 1964. Thirteen years later saw the end of the Canal Zone, it being deleted from the ARRL Countries list on 1st October 1979. On and after that date, ex KZ5 licencees had to apply for a HP licence to operate. The Canal itself however, continues to facilitate international trade under the terms of a joint commission of the two countries, but the year 200 will see Panama assuming full control of this remarkable engineering masterpiece.

If you would like to play a part in building up the WIA. QSL collection and to save something for the future, would you please send a half-dozen (more if you can spare them) QSLs which you feel would really help the collection along.

All cards are appreciated but we especially need commemorative QSL's, special event stations QSLs, especially assigned call QSLs (eg VK4RAN), pre-war QSLs, unusual prefixes, rare dx and pictorial QSLs of not so common countries. Could you help? Send to PO Box 1, Seville 3139 or phone (059) 643 721 for card pick-up or consignment arrangements for larger quantities of cards.

73


MP
ATL. SEC.
K5AM
HQ.
ATL. SEC.
RADIO VK3zw UR SIGS WKD HR OCT 14 1933 AT 0111 E S. T.
QSA 4 R 6 QRI DC QRM —
QRN — QRG 14353 KCS
XMITTER 802-VT25-VT4B 200 W
RECEIVER PAO
REMARK WILL QSL VIA VK3CX - 73 → over
PSE QSL OM. Pfc. J. Nelson.
HEADQUARTERS COMPANY, FORT DE LESSEPS, CANAL ZONE. PANAMA.

16-3-36
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AWARDS

Package from Moscow

Federal Awards Manager
Ken Gott VK3AJU
38A Lansdowne Rd
St Kilda 3183

Are the glastnost and perestroika policies of Soviet leader Mikhail Gorbachov having an impact on amateur radio? I think perhaps they are.

Recently I've noticed USSR amateurs giving PO Box numbers in their localities for QSL purposes, instead of "Box 88 Moscow", which for time immemorial has been the only QSL route to them.

Mind you, I've kept no notes or tallies, but this is a definite impression from listening on the DX bands.

As most of us know, the International Call Book is a dead loss to anybody wanting to contact a USSR amateur directly by mail, since it provides neither streets nor street numbers in the addresses. Sending a letter to "Georgi Ivanov, Saratov, would be as futile as sending one to "John Smith, Melbourne". In fact, I've often wondered why the Call Book publishers devote so many pages to useless QSL data. Still, I expect it is useful in checking whether the station you QSO'd is genuine or a pirate, and whether a club or individual station.

So much for glastnost (which broadly means more openness, less secrecy). However, perestroika (meaning reform in economic, commercial and related matters) may also be showing up too.

A couple of weeks ago I received a package containing the R6K Award of the USSR amateur society (see picture).

Is that remarkable? Yes, because the package was sent direct to my QTH.

For many years, Moscow has not posted awards directly to VKs. Instead, all awards due to them were stockpiled and at annual intervals, they were posted in bulk to the WIA Federal Office.

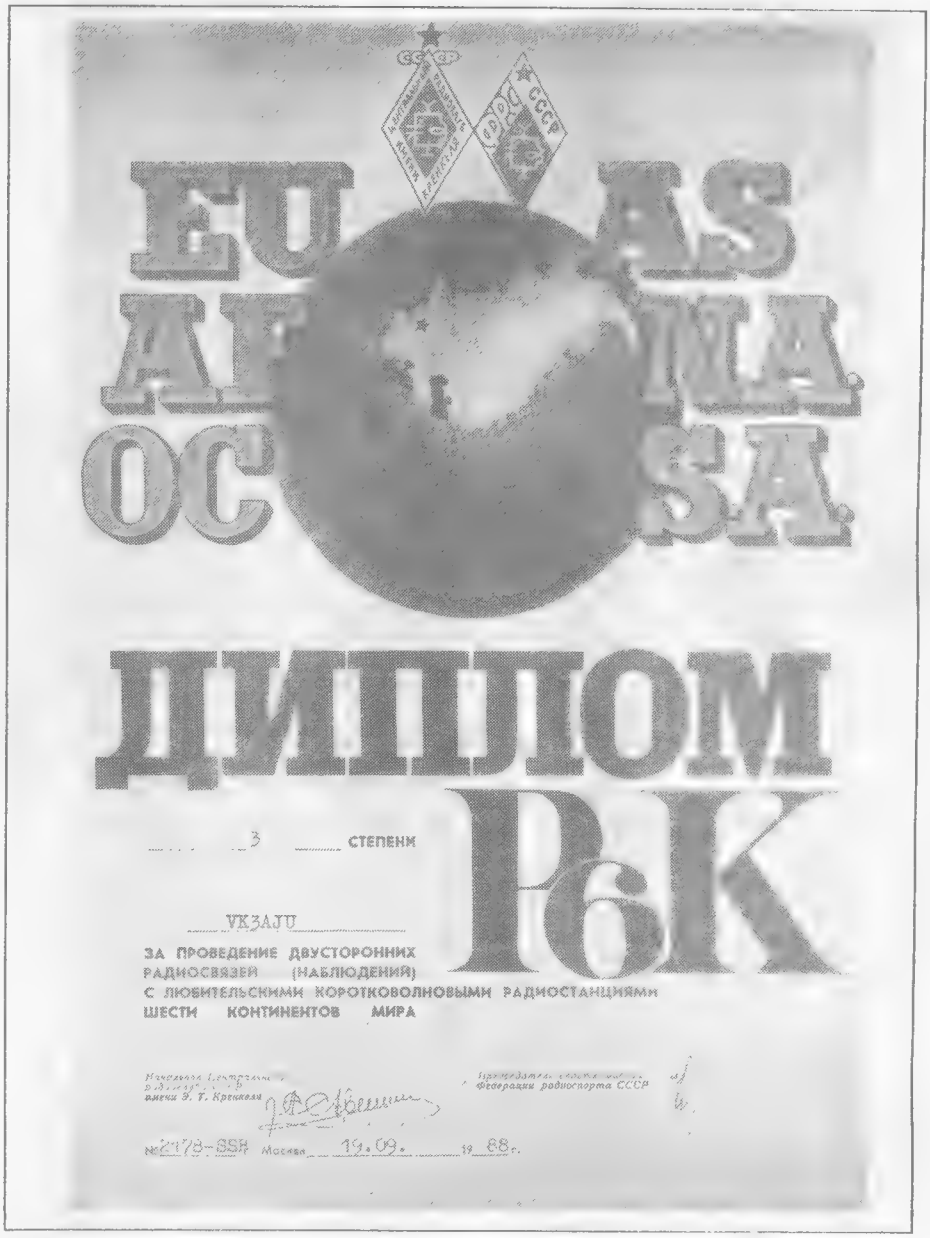
The WIA Federal Office was left with the job of tracking down the addresses of the recipients and meeting the costs of repackaging the certificates individually and posting them on.

We know that USSR amateurs and the USSR generally suffer a shortage of foreign currency, but this practice of throwing a gratuitous financial burden on a fellow amateur radio society always seemed a bit rough to me. After all, the USSR awards are priced at 14 IRCs each.

Anyway, the arrival of my R6K Award by direct mail (well-packaged, and registered to boot) may indicate a change. Let's hope so.

For those of you interested, the R6K is the easiest and most popular USSR award. You need cards from each of the six continents, plus three from European USSR and three from Asian USSR. The QSO's must have been made since May 7, 1962 by CW or phone, and any HF band will do. There's no need to send cards — just a list in the usual form, certified by an official of the WIA or your club. As mentioned above, include 14 IRCs. I need hardly tell that the address is Box 88, Moscow.

While the award certificates might not win prizes for design or typography, it is not without charm. It is produced in red, blue and magenta-grey on a white background, and being lettered in the Cyrillic alphabet gives it a nice exotic touch.



Snafu in DXCC List

The gremlins had some fun with the DXCC update in our March issue. Put it down to teething troubles with our new publishing arrangements. The victims were VK2AKP, VK3OT, VK3QI and VK3DYL. Their correct tallies are included in this month's update.

Return Postage

With minimum publicity, Australia Post raised overseas airmail rates and a variety of internal mail charges (but not the basic 39¢ letter rate) on February 13.

That serves as a pretext to ask all amateurs and SWLs who send me packets of cards to please include return postage. There should be no mystery in deciding what to send. If it costs $x to send me the cards, it will cost the same for me to send them back. If they come in one of those AP padded envelopes, I can usually recycle it for return of the cards.

Awards Issued Recently

WAVKCA
1632 Yoshio Tada JS1QHO
1633 Leo YB0HZL
1634 Bengt Eurenius SM3BNV
1635 F.K. Holtz W8CHV
1637 Satoshi Nagayama JR2PAU
1638 Masato Shimizu JG1TSF

DXCC (Phone)
366 Robin Pullet VK4KRP
367 George Mavros AX5AGM
368 Noel Wex VK4FQW

DXCC Updates (Corrected)

	CW	Phone	Open
VK2AKP		230/292	290/292
VK30T		303/307	306/310
VK3QI	263/269	309/316	311/318
VK3DYL		279	

The City of Wagga Wagga Award

Wagga Wagga is situated approximately half way between Sydney and Melbourne by the banks of the Murrumbidgee River, on the Sturt Highway in the Riverina Region of NSW. Wagga Wagga was discovered in December 1829 by Capt Charles Sturt. Wagga is an Aboriginal term for crow, thus Wagga Wagga is the plural for many crows. The city is 185m above sea level and is rural in its setting.

This award certificate and its upgrades of silver and gold is presented by the Wagga Amateur Radio Club (WARC). The award is open to all amateurs and shortwave listeners throughout the world on 80 metres. To become eligible for the award each participating station will have made contact with Net Controller (2 points) and eight other club member stations (1 point), making a total of 10 points. A station previously contacted can be worked again after 7 days for an extra point. Shortwave listeners and Amateur stations need simply prepare a log extract of the contacts made showing date, time, station and a signal report. Applications go to :

Awards Manager WARC

VK2MUZ Barry Gilmour
PO Box 294, Wagga Wagga, NSW 2650

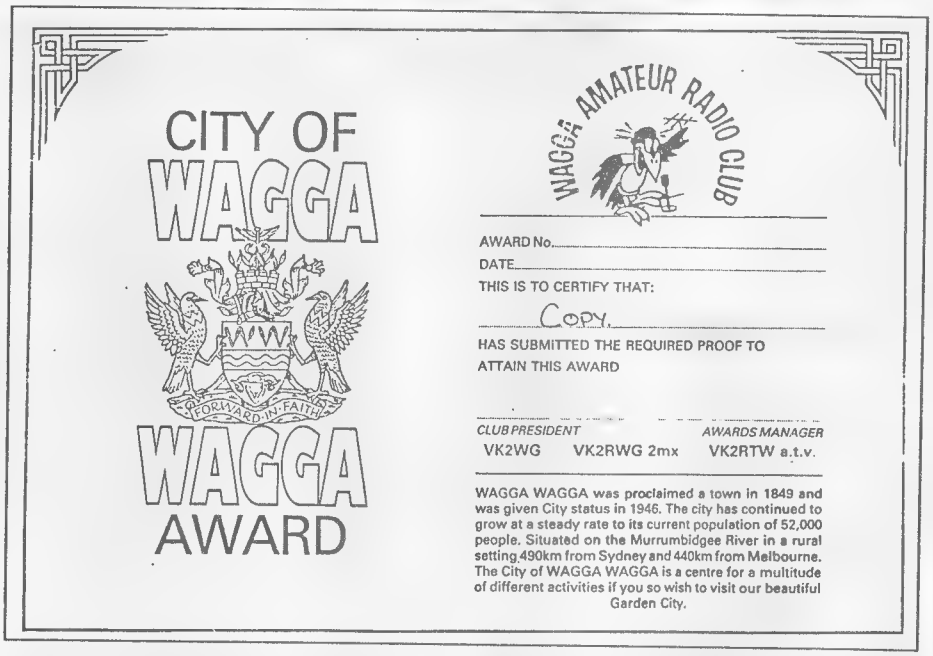
The award meeting night will be Tuesday evenings at 1030 UTC on 80 m. 3.60 + - QRM. Right after VK4 net.

Conditions for Basic Award

2 points for Net Controller
1 point for contact with club member
10 points for award - log extract and $3 cost of award.

Silver Upgrade for City of Wagga Wagga Award

An additional 40 points for silver upgrade to the City of Wagga Wagga Award is required. The basic award must have been worked, applied for and received. For the silver upgrade threre should be 24 hours between contacts with any WARC Station of silver, gold certificate holders who on request, will give signal report and time of contact. No cost.


CITY OF
WAGGA
WAGGA
AWARD
WAGGA AMATEUR RADIO CLUB
AWARD No.
DATE
THIS IS TO CERTIFY THAT:
COPY.
HAS SUBMITTED THE REQUIRED PROOF TO ATTAIN THIS AWARD
CLUB PRESIDENT
VK2WG
VK2RWG 2mx
AWARDS MANAGER
VK2RTW a.t.v.
WAGGA WAGGA was proclaimed a town in 1849 and was given City status in 1946. The city has continued to grow at a steady rate to its current population of 52,000 people. Situated on the Murrumbidgee River in a rural setting,490km from Sydney and 440km from Melbourne. The City of WAGGA WAGGA is a centre for a multitude of different activities if you so wish to visit our beautiful Garden City.

Gold Upgrade for City of Wagga Wagga Award

The City of Wagga Wagga basic award and silver upgrade must have been applied for and received. An additional 100 points are required for the gold upgrade. **A holder of the silver upgrade is now worth one point towards the basic, silver and gold awards** and like club member stations, can be worked every 24 hours. In the case of a station who has been worked as a silver or gold certificate holder and is not a WARC member, the certificate number must accompany the application for that point or points. Cost of the gold upgrade is $1. This is an honorary system for these upgrades.

City of Wagga Wagga 360 Upgrade

You are welcome to work towards our final award. Besides the Award Certificate a lapel badge depicting the city coat of arms will accompany this award. A total of 360 points is needed for the upgrade, comprising:-

40 points for club member at 1 point each
20 points for silver at 1 point each
300 points for gold at 2 points each

360 Total for Upgrade

Cost of the certificate and the lapel badge will be $7.00

Award Hunters

Here is an easy one. One contact only and it's a freebie.

The Air Force Amateur Radio Net is introducing their new Kittyhawk Award. All you have to do is send your QSL and SAE to the station on duty.

Hint: Try 80m any Tuesday evening.

Bob Neville VK4NFE
124 Roscommon Rd
Boondall 4034

POUNDING BRASS

Injured Scribe

Gilbert Griffith VK3CQ
7 Church St
Bright
3741

I am sorry, dear Morsiacs, that here I am on the second-last day before the deadline, with nothing to show in the way of a funny for the month of April. My only excuse is a couple of cracked ribs (from water skiing) and the hot weather which have prevented me from lifting things at work, and from doing practically anything else at all. So, I thought I would take the opportunity to re-submit an old favourite for publication, as it has been years since its last run. This version was handed to me by Denny, VK2CDM who was passing through Bright a couple of weeks ago.

The One Legged Typewriter

Written about a typewriter in Sydney office which bore the pathetic notice - "This typewriter has three broken legs."

You wear a sad, dejected air,
Poor old cripple, tott'ring there;
But still you bravely "carry on"
Though three of your four legs have gone.
Telegraphists with thatches grey,
In youth upon your keys did play;
You've surely earned distinguished mention
How is it that you've missed a pension?
Some men have gained an OBE
Whose merits can't compare with thee;
They have less wisdon, far, than you -
You only speak when spoken to.

You bear the marks of many wars;
Your broken legs are honoured scars,
And even the ribbon you have worn,
Is sadly faded and forlorn.
Throughout your many weary years,
You have recorded joy and tears,
Hopes, doubts and loves - you've known them all,
Births and deaths - gay festival.
I feel for you my old companion;
For though you've but one leg to stand on,
I'm forced to prop you up anew
And pound the dying breath from you.
-Frank Spruhan (Telegraphist)

SPOTLIGHT ON SWLING

Unwanted Outputs

Robin L. Harwood VK7RH
52 Connaught Crescent
W Launceston. 7250

Well, the first quarter of 1989 slipped rapidly away and already I have noticed that the number of parasitics and/or harmonics from broadcasters on HF are becoming audible with the higher solar flux. These spurious signals wouldn't be noticeable ordinarily yet with the improved propagation, particularly on the higher frequencies, I am sometimes finding the fifth or sixth harmonic of a station down in the tropical allocations.

And talking of spurious transmissions, Radio Ulan Bator in Mongolia is normally on 12015 kHz in English at either 0900 till 0930 UTC and again around 1200 kHz, yet there is a Chinese outlet co-channel. It overrides the Mongolian, yet because of a fault within the sender, Ulan Bator is better heard on 11991.5 kHz or 12.061.5 kHz at the same times. Somehow, I don't think the engineering staff would be too pleased, although the programme makers would presumably not mind. When the English programming concludes, there is programming in Chinese and Mongolian. Incidentally, they don't broadcast in English on Saturdays.

This month sees the commencement of another transmitter exchange agreement. This time it is between Radio Austria International and Radio Canada International. On the 4th, RCI will broadcast from the Moosbrun site to the Middle East between 0300 and 0500 in English and French. The channels chosen haven't been announced yet but it would be, presumably, in the 16 or 19 metre allocations. Radio Austria International will broadcast to North America on 6015 kHz from Sackville. Also on the same date, Radio Beijing is to broadcast from Sackville on 11845 to South America and on 5960 kHz to North America. The time for the first broadcast is from 0300 till 0400 and the second is from 0400 to 0500. Incidentally, Radio Japan uses the same frequency from Sackville from 0300 to 0400.

The new sender for Radio New Zealand International is due to come on before the 1990 Commonwealth Games in Auckland. The site is 40 km from Taupo and it is going to be a single 100 kW sender. The primary thrust will be the South Pacific with English and various indigenous languages of the region. They reportedly have scrapped broadcasts in Chinese and Japanese because of budgetary limitations.

Well, that is all for April. Until next time, the very best of 73.

ALARA

Results of Eighth Alara Contest, November 1988.

Joy Collis VK2EBX
P.O. Box 22
Yeoval 2868

No.	Callsign.	Name.	Points.	Certificate.
1.	VK3CYL	Kim	955	Top overall & VK3 Alara member (Bicent.)
2.	FK8FA	Joanne	592	VK4 Alara member (Bicent.)
3.	FK8FA	Aimee	557	Pacific area Alara member (Bicent.)
4.	ZL4IO	Melva	517	ZL non-member (Bicent.)
5.	VK6DE	Bev	501	VK6 Alara member (Bicent.)
6.	AX3XB	Ivor	411	Top VK om. (Bicent.)
7.	VK4YB	Roger	384	Bicent.
8.	ZL1ALK	Celia	363	ZL Alara member (Bicent.)
9.	VK2EBX	Joy	361	VK2 Alara member (Bicent.)
10.	VK4PT	Pat	346	Bicent.
11.	VK3DYL	Gwen	321	Bicent.
12.	VK3DMS	Marilyn	273	Bicent.
13.	AX6YF	Poppy	270	Bicent.
14.	VK3DVT	Valda	251	Bicent.
15.	VK7HD	Helene	250	VK7 Alara member (Bicent.)
16.	VK3KF	Eric	224	Bicent.
17.	VE7YL	Elizabeth	221	VE Alara member (Bicent.)
18.	ZL2AGX	Dawn	183	Bicent.
19.	VK5AOV	Meg	164	VK5 Alara member
20.	VK4AOE	Margaret	160	
21.	WA3HUP	Mary Ann	150	U.S.A. Alara member (Bicent.)
22.	IK5HMQ	Graziana	126	European non-member (Bicent.)
23.	VK3DYF	Bron	107	
24.	OK2BBI	Zdena	92	European Alara member (Bicent.)
25.	ZL2QY	Pearl	90	Bicent.
26.	L40018	Charles	84	VK SWL OM
27.	DF2SL	Anny	81	
28.	VK3XF	Les	78	
29.	ZL2UKG	Gwen	71	
30.	VK5BS	Barry	69	
31.	VK5KTH	Christine	65	
32.	VK3ALD	Len	44	
33.	CT1CIR	Antonio	20	European OM
34.	VK3AEQ	Vic	05	
35.	VI88WIA	Mavis	Check log. Bicent.	
36.	VK5BMT	Maria	Check log.	

**"Bicent." indicates a Bicentennial Certificate.*

Mavis was issued with a special Bicentennial Certificate for her operation of the VI88WIA callsign during the Contest.

Logs received: ALARA members 23, YL non-members 2, OMs 9, Check logs 2.

Bicentennial Certificates issued: 23

Contest Manager: Marlene VK3JAW

Marlene Comments:

"A better year on the bands for the Contest, with more logs received from overseas amateurs, and with OMs contributing a quarter of the logs received. We thank the chaps for their participation.

I believe the ladies achieved smaller scores this year, but many people had more to try and fit in on the same weekend.

I did enjoy reading the notes enclosed with the logs, and apologise for not being able to respond in kind."

That wraps up the ALARA Contest for another year. Hopefully in the next Contest the Mrs.McKenzie Trophy will be awarded once again. Unfortunately no novice YL qualified for it on this occasion.

Mavis Stafford Bicentennial Trophy.

The winner of the Mavis Stafford Bicentennial Trophy is Bev Hebiton VK6DE, with a score of 90 ALARA members contacted during 1988. She will receive the silver-plated oval dish, suitably inscribed, donated by Mavis VK3KS.

The winner of the Consolation Prize, a crochet table centre donated by Margaret VK4AOE to the YL who scored the middle position in the points ladder of YLs applying, was won by Melva Malkin ZL4IO, with a total of 56 ALARA members contacted during the Bicentennial Year.

Congratulations to Bev and Melva, and sincere thanks to Mavis for the Trophy, and Margaret for the Consolation Prize.

Talking to School Children.

"The local radio club SPARC was involved in demonstrating amateur radio one afternoon a week to, mostly, grade 6 children (about 12 years old) as part of their media studies projects in the Bicentennial Year 1988.

I volunteered, with other members, to listen on 80 metres in case required, if someone further afield could not be contacted. In a period of 10 weeks I spoke to approximately 100 children, from Eastbourne, Dromana, Rosebud and Rye Primary Schools, all quite local.

Answers to questions are mostly very brief, but a few are talkative, and the results have been very worthwhile. In October the Ballarat Radio Group set up a station at the Dana Street Primary School and I found myself responding to them. In that instance the ages ranged from 6 to 12 years."

(Bron VK3DYF)

NZ WARO Mountain Buttercup Award.

1. For contacts with licensed NZ WARO. members, resident, visiting mobile etc. in the sixty towns named in the official list. A WARO member working mobile, portable etc. may claim the relevant town for her own credit.

2. Contacts may be any mode, any band or mixed and made from any QTH, but each YL worked must be a financial member of NZ WARO at the time of the contact and must be within a 25 kilometre radius of the centre of the town claimed.

3. Contacts made via repeaters, in nets and in contests will qualify and the same WARO member may be contacted in any number of towns.

4. Award dates from 1st January 1989. Send applications containing full log details with name of YL and town where worked, signed by one other radio amateur, together with $2.00 to Custodian: Vicki Shaw ZL1OC, PO Box 2088, Whakatane, New Zealand.

5. Endorsement seals for each further 10 contacts using the same list of towns. The same WARO members may be worked but each must be in a different town to where previously claimed. Please send SAE with endorsement applications.

North Island Towns.

1.	Auckland	21.	Palmerston North
2.	Dannevirke	22.	Papakura
3.	Dargaville	23.	Putaruru
4.	Eketahuna	24.	Rotorua
5.	Featherston	25.	Taihape
6.	Gisborne	26.	Taumarunui
7.	Hamilton	27.	Taupo
8.	Hawera	28.	Tauranga
9.	Helensville	29.	Thames
10.	Kaikohe	30.	Te Awamutu
11.	Kaitaia	31.	Te Kuiti
12.	Masterton	32.	Turangi
13.	Matamata	33.	Upper Hutt
14.	Morrinsville	34.	Waihi
15.	Napier	35.	Wairoa
16.	New Plymouth	36.	Wanganui
17.	Opotiki	37.	Wellington
18.	Orewa	38.	Wellsford
19.	Otaki	39.	Whakatane
20.	Paihia	40.	Whangarei

South Island Towns.

41.	Alexandra	51.	Invercargill
42.	Ashburton	52.	Kaikoura
43.	Balclutha	53.	Motueka
44.	Blenheim	54.	Nelson
45.	Christchurch	55.	Oamaru
46.	Cromwell	56.	Queenstown
47.	Dunedin	57.	Reefton
48.	Gore	58.	Timaru
49.	Greymouth	59.	Wanaka
50.	Hokitika	60.	Westport

Bits and Pieces.

It was a great pleasure, some weeks ago, to meet Heather VK2HD for the first time. Thanks from OM Dan and myself, Heather, for your hospitality.

Bev VK6DE must be on a "winning streak". Besides winning the Mavis Strafford Bicentennial Trophy she won an Amateur Radio Survey Gift - a 1989 ARRL Handbook. Congratulations once again, Bev.

Please take note of the date for the next ALARAMEET, 29/30th September, 1990 at Dubb, NSW.

The ALARA Net is held on 3.580 MHz every Monday evening at 1030 UTC (1000 UTC during daylight saving time). Monthly general meetings are held on air as above on the fourth Monday in the month, except December. We are always pleased to welcome "new voices", and would be happy to hear from other YLs.

The Thelma Souper Memorial (W.A.R.O.) Contest this year will be held on Saturday April 15th and Sunday April 16th from 0700 to 1000 UTC on 80 metres.

New Members.

Welcome to new DX members - Merilyn WA4NRX and Raija SM0HNV.

73/33

Joy Collis VK2EBX

ALARA Award Update

Cert. No.	Date	Recipient	Callsign	Sticker	Bicent.
8.	24/12/88	Poppy Bradshaw	VK6YF	4	1
146	28/12/88	John Hampel	VK5SJ	5	1
13	25/01/89	Jenny Warrington	VK5ANW	1	1
70	25/01/89	Alma Wills	ZL2AWP	5	1
103	26/01/89	Margaret Schwerin	VK4AOE	3	1
88	31/01/89	Valda Trenberth	VK3DVT	2	1

HOW'S DX

New Columnist

We introduce here our new DX columnist and editor, Pat Kelly VK2RZ of Ourimbah on the NSW central coast. Pat's involvement with radio began on the Citizens' Band and he heard his first DX on 27 MHz. He graduated to a Novice licence in May 1987 and worked 148 countries before gaining his full call one year later.

Anyone who has DX information to contribute to this column should write direct to:

Patrick Kelly VK2RZ PO Box 41, Ourimbah 2258 (phone (043) 621 235)

However, for this issue only we are also publishing, after Pat's round-up, some other DX information (from VK2PS, VK2OD and VK3PC) which was sent direct to us and is of immediate interest.

Ed.

With band conditions improving every day, DXing activity is becoming somewhat hectic. Here on the east coast the 10,15 and 20 metre bands have good daytime openings to just about anywhere. Around mid-morning 20 metres fades out for a few hours, but with the higher frequencies being so good the tuning knob still gets a solid workout.

For those who missed Hans 4WQPA in North Yemen he should be back on air by now. After twenty years of no amateur radio operation from this country anyone who needs it will have plenty of time as Hans will be there for two years. His QSL Manager is PA3CXC.

Laos XW did seem certain to come up in mid-February. Despite some problems with operating conditions (?) the Hungarians say they now have the necessary paperwork in order. They certainly did a great job in 3W so good luck to them. (But see later information from 3PC. Ed)

Spratly Is has been on and off a few times since January. Lack of transportation was said to have stopped them on two occasions.

A new DXCC country from East Kiribati is in the planning stages. Either Malden or Starbuck islands in the southern line island group are being considered by a prominent VK DX-peditioner.

Laccadives

For the first few days VU7NRO was concentrating on CW around 14.010 MHz. I managed to work VU7APR/BL on 21.202 MHz at 2200Z under very difficult conditions. On other bands they were using 28.530 MHz, 14.140 MHz and 14.230 MHz. There were no early reports for 40 and 80 metres.

The five operators were to be there until March 15. There was a possibility that permission to extend their stay might be given. QSL to VU2APR.

St. Lucia

An interesting special callsign for this small Caribbean island celebrating ten years of independence was J61QA.

I worked Lionel long path on 21.293 MHz at 2019Z. QSL to PO Box 171, Castries.

Tot, J6LMV is also active. QSL to PO Box 1617, Castries.

Vietnam

Operation from 3WQA was, to say the least, sporadic. Several VK & ZL stations reported hearing them calling CQ, so it may be the HA boys moved this one a long way down the wanted countries list.

QSL to W4FRU

Islamic Republic of Iran

Hassan, EP2HZ has been very active on 20 metres, and operates at a fairly leisurely pace compared to the five and nine crowd.

QSL to PO Box 3133 Tehran, Iran 16765

Montserrat

Dave, VP2MDB was on 10, 15 and 20 metres until April 5th. QSL to W2WSE

Liberia

I worked Wadji EL2CI on Snookie's Net - 14.183 MHz, using a special call EL2LMP/4Q.

The occasion was to celebrate forty years of the Liberian Maritime Service.

QSL for both calls to K5HUT.

Islamic Republic of Iraq

YI1BGD is a club station in Bagdad. If you work this one make sure you get the QSL information at the time, as each operator gives a different PO Box number.

Should you only have the name of the operator then put it clearly on your QSL card and try: Faris K Kubba, PO Box 7147, Bagdad.

Another operator is Diya YI1BGD/A. QSL to PO Box 7361, Bagdad.

Diya advised that a special event station YIQVP was operating on most bands to celebrate "Victory and Peace". No QSL route was available.

Zone 40 - Franz Josef Land, Jan Mayen, Svalbard and Greenland.

At present there are two active operators from Franz Josef Land - Roman UA1OT - QSL to UB5KW and UA1OIL - QSL to UA9MA. IRC's are OK for SASE.

If you need Ivor, JX1UG on 40 or 15 metres have a look on Sundays at 0800Z on 7.163 or 7.159 MHz with John KD0JL.

Then at 0900Z on 21.335 MHz with Den GW3CDP.

He checks in quite often with Jim VK9NS on 14.222 MHz. QSL to LA5NM.

I have only found Ivan JW6WDA on 20 metres so far. QSL to LA5NM.

Helge, OX3SG is very active on most bands. I am not aware of any VK's that may have worked him on 10 metres.

QSL to LA5NM.

Central African Republic

Dieter, TL8WD has been making the rounds on several DX nets. He will be in Africa for two years. His home call is ZL2QB. QSL to DL8CM.

Mali

So far I have only worked Dennis TZ6MG on 15 and 20 metres. Signals from Southern Africa on 15 metres are usually good at 0500Z. Check out the ANZA net at that time every day on 21.205 MHz. Dennis' QSL route is: Eddy Eliveld, PO Box 2095, 8203 AB Lelystad, Netherlands.

Qatar

This not so active Persian Gulf state was a new country for me. Mohammed, A71BK had a good signal on 14.188 MHz at 0616Z one Friday afternoon.

QSL to KI4GV.

Eastern and Western Caroline Islands

Husband and wife team Bob and Judith spent four weeks scuba diving and DXing from both KC6 call areas. From Belau Island they were signing KC6MH and KC6MB. While on Truk Island their calls were KC6NW and KC6JW. QSL to DF6FK.

American Samoa

Another DL holidaying away from Europe's winter chill was Hilda, DL5UF/KH8. There seemed to be a lot of stations needing this one if the pile ups were an indication. QSL to Hilda's home call.

More Vietnam

Another call used by UL7PAE, and RL7GK for their last three days was 3W4KZ. QSL for this call only is to UL7PAE.

Next month I hope to be able to report on Marion Island ZS2. A South African operator has a two year posting to this remote island. I know there are many who need this one.

Pile-ups on 10 metres are there every day now. Most attention is directed toward the Caribbean due to the large flocks of North Americans who fly south during their winter.

In the two months prior to last Christmas I worked all of Central America, most of the Caribbean, and all of South America with the exception of Guyana on this band - it certainly is my favourite. So if you have been missing out on the fun it is definitely not too late!

Good DX!

Stop Press

On Saturday, 18th March, it was reported in a bulletin from the ARRL on W1AW that 4W0PA was QRT and had returned to the Netherlands.

Hans had been detained at the border returning from South Yemen and accused of contacting the enemy.

Earlier that week it was also reported that the ARRL DXCC chiefs had refused to accept 4W0PA as a legitimate operation.

DX Worked or Heard on the East Coast

Stephen Pall VK2PS

From 11 Jan, 1989 to 8 Feb, 1989

14MHZ

UH9AWE	Vitaly in Ashkhabad Turkoman Republic
CO2HQ	Reinaldo in Havana, QSL via Bureau
AH9AC	Tom on Wake Island, QSL to I8YCP
VP2E/KB0AQB	QSL via Home call
EL2E	Rudi in Monrovia - QSL to HB9STZ
YN3CC	Jose in Managua (CW) QSL to W3HNK
JT2AB	Ban in Chob (CW) QSL via Bureau
PZ1DY	Imroh in Paramaribo QSL to PO Box 9131 Paramaribo, Surinam, South America
KH0/JA1QGG	Yoshi in Saipan QSL via JA Bureau
HC3AV/5	Al in Cuenca (CW) QSL to Box 1300 - Cuenca, Ecuador, South America
YV5JDP	John/Caracas QSL via Bureau
TN4NW	Brazzaville/Congo
QSL via AL7EL	
CX1DDT	Pepe in Orono near Montevideo QSL to PO Box 571, Montevideo, Uruguay
3W0A	Vietnam DX Expedition QSL to W4FRU
ZK1XI	Mats visiting South Cook Islands QSL to SM7PKK
ZF1RC	Roger Cayman Island Caribbean QSL to Box 1549, George Town, Grand Cayman Island
XX9CT	Phil in Macau QSL via KA6V

21MHz

KA6RB	Roy in Okinawa QSL to P.O. Box 5163 Camp Courtney FPO SW ZIP 98773
KZ5Z/DU1	Jon in Manila QSL to NA5U

28MHz

VK9ZM	QSL to NM2L
VP5/G0AZT	Ed on Providenciales Island Caicos Island Group, Bahamas QSL to PO Box 5194, Richmond, CA 94805, USA
EI8AR	John in Cork County QSL via Bureau

7MHz

VK9ZM

3.5MHz

VK9ZM, VE1ZZ

VE1ZZ

Heard but not worked

VP8BGQ	QSL to Box 97, Pt Stanley Falkland Islands
TL8WD	Dieter in Central African Republic QSL to DL8CM
W2KW/KV	4QSL to P.O. Box 7055 St Thomas, US Virgin Islands

North Yemen

The hottest DX activity for many many years. It popped up on 14 MHz on the 28th January, 1989. The operator is Hans and he is using the callsign 4W0PA. He is using 80 watts into a dipole only on 14 MHz he had a lot of difficulty bringing his equipment into Yemen. He has no linear or beam, and unless the Yemeni authorities change their mind, he will be using the present equipment for the next two years.

Hans due to his profession is under contract to the North Yemeni authorities. As a result of this he will be temporarily QRT for 6 weeks as from the 18th February to attend a course in the Arabic language.

At this stage Hans is operating through nets only. He comes up almost daily on Jim's net (VK9NS 14.222 MHz) at 0430 UTC for 30 minutes.

He can also be found on the European net around 2000 UTC on 14.180 MHz - quite often in CW mode on 14.020. Net controller is: PA3DZN Alex.

He can also be found on "Snooky's" net (14.183 MHz) around 1900 UTC. QSL Manager PA3DZN

Ten Metre Beacons

(Ref. Feb issue A.R. pages 21,27 and 36)

Tom O'Donnell VK2OD reports another 28

MHz beacon copied January 4th, 1989. Call sign, OH2TEN. Frequency 28.2525 approx. ID, signing just the callsign. Time copied approximately 1045 UTC. A weak signal but readable in the QRM and QRN at 3/5x1x9. (The KIEL beacon DF0AAB copied at 1100 UTC on 28.2775. Signs were 3/4x1x9 and affected by QRM and QRN(local).

The ZL beacon ZL2MHF on Mt Climie comes in well here, at times up to 5x8x9. It signs EIRP 1 watt. However, I note that its power according to your list is 50w (p. 36). Frequency 28.230 0

The Florida beacon on 28.297 MHz now signs 30w to 5/8 wave ground plane. Call sign WA4DTS. Copied here at 5.1.9 on 11.2.89, 2200 UTC (P. 36).

Other beacons logged recently are:

1. WC8E/BCN 28.2950 @ 2005 UTC
2. W3VD/BCN 28.2960 @ 2013 UTC 28.2960
3. WJ7X/BCN Seattle 5 watts 28.252

Beacons 1 and 3 do not appear in the world beacon listing. P. 36 A.R.

Late DX news from Jim Linton VK3PC

The South African remote territory Marian Island is due to be activated for the first time in a decade this month when a meteorological team which includes a radio amateur arrives. Marian Island is south-east of South Africa and near Prince Edward Island. It was last on air in 1979.

The South African Government has banned DXpeditions from visiting the Island because a United Nations territory only permits inhabitation related to scientific research.

Peter ZS6PT will be a technician with a meteorological team due to stay on Marian Island for 14 months. Using the callsign ZS8MT he plans to work HF, six metres, through satellites and operating on both phone and CW. He will be using rhombic antennas which are part of the meteorological service communications.

The planned expedition to Laos XW has been cancelled. The Hungarian operators who activated 3W Vietnam returned home and then travelled to Laos, but reported the local situation was unsafe. They could try again for XW in May or June.

Rotuma 3D2 is expected to be on air around April 6 activated by 5W1GP from nearby Western Samoa.

A multi-national group of operators plans to put XF4L on air from Revilla Gigedo Island off the Mexican Coast between April 11-19. The island ranks among the top 20 on the European most wanted lists although it was activated two years ago signing XF4DX.

"Stop Press" DX-News from VK2PS

D2-Angola

Unconfirmed news in various DX bulletins indicate that 2-OH operators, 1-JA and 3-XE operators will operate from Angola between the 11th and 19th April. The tentative call sign will be D2ONU.

Middle East DX Expedition

It is probable that on the 26th March we might hear the following call signs: SU89ACC, JY89ACC, YI89ACC, YI0ACC, and 4W89ACC. At this stage we do not have any further details of this proposed operation.

Zoli, HA5PP at the operating desk of 3W8DX

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AMSAT AUSTRALIA

Satellite Information

Maurie Hooper VK5EA
11 Richland Road
Newton 5074

National Coordinator
Graham Ratcliff VK5AGR
Information Nets

Amsat Australia
Control: VK5AGR
Amateur check in: 0945 UTC Sunday
Bulletin commences: 1000 UTC
Primary frequency: 3.685 MHz
Secondary frequency: 7.064 MHz

Amsat SW Pacific
2200 UTC Saturday, 14.282 MHz

Participating stations and listeners are able to obtain basic orbital data including Keplerian elements from the AMSAT Australia net. This information is also included on some WIA Divisional Broadcasts.

AMSAT Australia Newsletter and computer software.

The excellent Amsat Australia Newsletter is published monthly by Graham VK5AGR on behalf of Amsat Australia and now has over 300 subscribers. Should you also wish to subscribe, send a cheque for $20 payable to Amsat Australia addressed as follows:

Amsat Australia, GPO Box 2141, Adelaide. 5001

The newsletter provides the latest items on all satellite activities and is a "must" for all those seriously interested in amateur satellites.

Graham also provides a Software Service in respect to general satellite programs made available to him from various sources. To make use of this service, send Graham a blank formatted disk and a nominal donation of $10 per item to Amsat Australia together with sufficient funds to cover return postage. To obtain details of the programs available and other Amsat Australia services send a SASE to Graham.

oops.....

The February issue encountered some typesetting problems with the James Miller program listings, making them a bit hard to understand in places. If you would like a copy of the listings, send a SASE directly to me - not Amsat Australia.

Oscar-9 re-entry imminent

Oscar-9 (UoSat-1) was launched on October 6, 1981 from Vandenberg Air Force Base aboard a Delta rocket and placed into a 554 km 95 minute orbit. The orbit is now decaying rapidly, and in January the Royal Greenwich Observatory (UK) predicted re-entry of the satellite in early October. It appears touch and go whether Oscar-9 will "live" to reach its 8th birthday. The following items are extracts from UoSat-Oscar-11 Bulletins 170 to 173.

Monitoring the decay process.

Because of the residual Earth's atmosphere at this altitude, the orbit is slowly decaying, and as the orbit lowers, the atmospheric drag increases, causing the satellite to decay faster. The effect is exacerbated by the increasing solar activity, as this causes the Earth's atmosphere to rise, thus increasing the drag. The current altitude of the satellite is 430 km and it is decaying at a rate of approximately 300m per day.

It is possible to follow the decay of the satellite by monitoring how the orbital period (and hence the altitude) changes with time. This can be done by monitoring the Doppler shift of the satellite's signals over the course of two orbits to note the time between two consecutive 'Time-of-Closest-Approach' (TCA)s. If you have a receiver with a Doppler shift output, plot the Doppler S-curve for two consecutive passes. The TCA can be found by reading off the time for which the curve's slope is steepest. The time between the two TCAs is the orbital period, from which the altitude can be derived using Newtonian mechanics. If you have a 2m receiver with a centre-frequency indicator, you can identify the TCA by noting the time at which the received frequency is exactly the frequency transmitted by the satellite (ie 145.825 MHz). If your receiver has none of these facilities, then you may assume that the TCA is approximately half-way between the 'Acquisition-of-Signal' (AOS) time, and the 'Loss-of-Signal' (LOS) time, providing that your radio-horizon is fairly uniform.

If you keep a record of your results over a period of time, you will be able to plot the decay curve of the satellite. This will also enable you to modify the Mean Motion (1440/Period) of the satellite in the Keplerian Element set, so that your orbital prediction programs can keep up with the rapid decay.

Here are some values of mean motion from Keplerian elements since about the middle of last year. The equations to calculate the Semi Major Axis and Altitude are:

SMAX = 42220 * (mean motion) ^ (-2/3)
Altitude = SMAX - 6370

Mean Motion	day	Km Altitude	Mean Motion	day	Km Altitude
15.33214	163	470.9473	15.36110	285	462.3464
15.33416	177	470.3458	15.36428	291	461.4041
15.33564	186	469.9082	15.36517	293	461.1397
15.33692	194	469.5277	15.36928	302	459.9237
15.33752	198	469.3489	15.37339	310	458.7040
15.33866	207	469.0083	15.37481	313	458.2841
15.33998	214	468.6155	15.38421	333	455.5016
15.34159	222	468.1383	15.39169	348	453.2920
15.34218	225	467.9643	15.39431	352	452.5170
15.34535	242	467.0198	15.40615	4	449.0213
15.34765	249	466.3383	15.41017	9	447.8361
15.34926	255	465.8598	15.42808	28	442.5587
15.35291	267	464.7759	15.42914	30	442.2469
15.35643	276	463.7335			

The competition is as follows: Using any method you choose, predict the precise day on which UoSat-1 will decay completely (ie burn up in the atmosphere).

Send the following information at least One Month before your prediction:

Name:
Occupation:
Address:
Receiving Equipment:
Predicted Decay Date:
Method Used:
Sweatshirt Size (Large/Medium/Small):

A prize of a UoSat sweatshirt will go to the winning entry.

Send in your answers to Craig Underwood, G1WTW, at the following address:

UoSAT Mission Control Centre, University of Surrey, Guildford, Surrey, GU2 5XH, England.

Keplerian Elements.

Satellite: UO-9
Catalog number: 12888
Epoch time: 89048.55577078
Element set: 457
Inclination: 97.5813 deg
RA of node: 95.8038 deg
Eccentricity: 0.0003250
Arg of perigee: 156.6309 deg
Mean anomaly: 203.5093 deg
Mean motion: 15.44699395 rev/day
Decay rate: 5.8464e-04 rev/day^2
Epoch rev: 41043

Beacons On

All four HF beacons are now switched on (ie January-Ed.) and transmitting telemetry in 12 wpm morse code. The frequencies are 7.002, 14.002, 21.002 and 29.510 MHz. Reception reports thus far have described interesting propagation phenomena such as auroral flutter, absorption, and sub-horizon propagation up to 20 minutes before AOS on VHF! The 7.002 MHz beacon was activated only this week, so please listen carefully and please send any reception reports to UoS. Any reports of trans-equatorial propagation from these beacons would also be of great interest.

U4MIR Comes to Life!

Stations around the world have been reporting hearing and working U4MIR. According to Hans, ZS6AKV, stations in southern Africa worked the new MIR station as early as Thursday, Feb 9. Pat, G3IOR, worked U4MIR on Friday the 10th. By Saturday Feb 11, many stations in eastern Canada and in Europe were reporting contacts, including Bill, VE3EFX, and his XYL, VE3HIR. W2RS had one at 19:38 UTC on Sunday Feb 12 and another the same day at 21:13 UTC.

VE3EFX reports that the new operator's name is Alexander. His English is quite poor and he does seem to be having some trouble with callsigns. But he is trying, so please speak slowly and distinctly, sticking to standard ICAO phonetics. Most of these contacts, including those of W2RS, were made on 145.550 MHz simplex. Alexander also seems to be using 145.650 MHz as a secondary frequency; several simplex contacts were made there as well. So far at least, Alexander seems to be keeping the same general hours as did Musa, U2MIR, in

that most contacts are being made at about 19:00 UTC or later, in the period between the cosmonaut's dinner hour and lights-out. Mir's operations schedule is on Moscow time, which is three hours ahead of UTC.

New Crew in April.

Pat, G3IOR, reports that a new crew will be going up in April, and is receiving Amateur Radio instruction on the ground. We look forward to more Amateur operation from the spacecraft as time goes on. No new QSL information has been received, so until further notice cards should probably still go via Boris Stepanov, UW3AX, PO Box 679, Moscow 107207, USSR. Please continue to report any information concerning MIR to AMSAT Net Control Stations so that it may be passed on to others.

N8IWJ Is Recognised by ARRL and Fellow Teachers for SKITREK Efforts

Rich Ensign, N8IWJ, AMSAT-NA Science Education Advisor, was recently recognised by the ARRL Board of Directors for the outstanding job he did in bringing the world of amateur radio into school classrooms last year. Rich produced the AMSAT Teachers Guide: "Exploring the High Arctic From Your Classroom"; teachers from all around the world used it as a guide in teaching lessons about the North Pole. With the help of amateur radio operators, thousands of school children heard the DIGITALKER aboard UoSAT-OSCAR-11 as it "spoke the position" of the ski-trekkers as they made their way across the North Pole. In addition to the Teachers Guide, Rich also generated a weekly progress report on the status of the trekkers and he made sure that the reports arrived in a timely manner to teachers who were involved in this program. The ARRL Board of Directors recently recognised Rich for his efforts in this endeavour. Also, Rich's colleagues have likewise recognised him - he was voted "Teacher of the Year" at Crestwood High School in Dearborn Heights, MI

73 Maurie VK5EA

Satellite Activity for November 1988 - January 1989

1. Launches

The following launching announcements have been received:-

Int'l Number	Satellite	Date	Nation	Period min	Apg km	Prg km	Inc deg
1988-							
103A	Cosmos 1981	Nov 24	USSR	90.4	374	245	62.8
104A	Soyuz TM-78	Nov 26	USSR				
105A	Cosmos 1982	Nov 30	USSR	90.4	403	215	70.0
106A	STS-27	Dec 02	USA				
106B	USA 34	Dec 02	USA				
107A	Cosmos 1983	Dec 08	USSR	89	251	197	62.8
108A	Ekran 19	Dec 10	USSR	23h39m	35455		1.5
109A	Skynet 4B	Dec 11	UK	1403.3	35860	34424	3.1
109B	Astra 1	Dec 11	Lux'bg	1428.8	35573	35518	0.2
110A	Cosmos 1984	Dec 16	USSR	89.6	345	195	62.8
111A	PRC 25	Dec 22	China	Geo sync at 110.5 deg E			
112A	Molniya 3-34	Dec 22	USSR				
113A	Cosmos 1985	Dec 23	USSR	95.2	549	529	73.6
114A	Progress 39	Dec 25	USSR	88.7	255	193	51.6
115A	Molniya 1-74	Dec 28	USSR	700.5	38874	623	62.8
116A	Cosmos 1986	Dec 29	USSR	89.4	316	204	64.8
1989 -							
001A	Cosmos 1987	Jan 10	USSR	11h15m	19140		65
001B	Cosmos 1988	Jan 10	USSR	11h15m	19140		65
001C	Cosmos 1989	Jan 10	USSR	11h15m	19140		65
002A	Cosmos 1990	Jan 12	USSR	88.7	259	192	82.6
003A	Cosmos 1991	Jan 18	USSR	90.4	401	216	70

2. Returns

During the period two hundred and eighteen objects decayed including the following satellites:-

1975-029A	Molniya 3-2	Nov 29
1983-011A	Astro B	Dec 17
1987-086A	Cosmos 1890	Dec 26
1987-103A	Cosmos 1902	Dec 30
1988-026A	San Marco-D	Dec 06
1988-075A	Soyuz TM-6	Dec 21
1988-083A	Progress 38	Nov 23
1988-087A	Horizon 1	Jan 14
1988-103A	Cosmos 1981	Dec 08
1988-105A	Cosmos 1982	Dec 14
1988-106A	STS-27	Dec 06
1988-107A	Cosmos 1983	Dec 22

(Information submitted by Bob Arnold VK3ZBB)

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(03) 723 3094

DIVISIONAL NOTES

NSW Bulletin

Tim Mills VK2ZTM
Minibulletin Editor
PO Box 1066
Parramatta NSW 2124

The Annual General Meeting of the NSW Division of the WIA will be held at Amateur Radio House, 109 Wigram Street, Parramatta, NSW on Saturday afternoon 29 April 1989 at 2 p.m.

A separate posting of the annual report and balance sheet is made to members.

Change to Postcode

Australia Post has changed the post code for post boxes at Parramatta. When addressing mail to the Division would you use the postcode 2124 after the post box address.

Activities for April

The next Trash and Treasure will be held at VK2WI Dural on Sunday afternoon 2nd April. VK2WI is at 63 Quarry Road, Dural. Broadcast will advise of venue change should the weather be adverse. This Sunday is also the first Sunday of the month which is the normal barbecue day. Why not bring and have a barbecue before the event? Sale to start at 2 p.m.....The St. George Amateur Radio Society will be hosting the next Conference of Clubs on Saturday 15 April. Venue, the St. Georges Leagues Club, Princes Highway, Kogarah. 10 a.m. start. Agenda will include any items received from clubs for discussion together with the Federal Convention agenda items to hand at that time....The post code contest for April will be 70 cm, all modes on Friday 28th between 9 and 11 p.m. Log to be returned to the office by May 10th.

VK2WI

A transmitter fault developed with the 2 metre SSB system on 144.120 MHz. It will be out of service for a while. It has also been suggested that the frequency, which has been in use for more than 10 years, is too close to the calling frequency of 144.100 MHz. Council would like to hear the views of Members as to whether they have suffered any interference and whether a change is required. If so, where to? Please write to Divisional Council if you have a view on this matter.

Equipment has been donated by Dick Smith Electronics to the Division so that a 23 cm repeater can be established at VK2WI. The assembly of the system is being undertaken at the moment.

It will not be long until the annual fireworks display will be held at VK2WI. The most likely date will be Saturday evening, June 3rd.

Spectrum Analyzer Course

There was an average attendance of 25 to the course held during February. The next course will be announced on the Divisional broadcast. A reminder that the broadcasts start at 1045 am and 1915 pm. If you miss these sessions then catch up on the major points by telephone on 02 651 1489. If you have packet then most of the text may be found on VK2RWI on 4850 in Sydney or on other Bulletin boards around VK2.

Office Administration

Margaret Morris has settled into the office routine for the Division and the Office is again open during the usual hours of 11 a.m. to 2 p.m. Monday to Friday, together with the Wednesday evening opening from 7 to 9 p.m. The phone number during these times is 02 689 2417. If you can assist with phone answering in the office one or more days per month contact Tom VK2JTD to be included on the roster, either QTHR or via the office.

Publications

A few 1988 Australian callbooks remain at the office. There is a reprint of the log book available in two sizes. Select the size to suit your operating.

New Membership Applications for March, 1989

W.E. Dunn VK2BDW Kings Langley
K.N. Greenhalgh VK2KG Adamstown Heights
J.A. Johnston VK2PWB Hazelbrook
NAME
NAME
NAME
NAME
NAME
NAME

WA Bulletin

John Sparkes VK6JX
83 Anemone Way
Mullaloo 6025

Australian Amateur Radio Teleprinter Group (AARTG)

The AARTG is THE group for anyone interested in narrow band data transmission modes such as RTTY or PACKET radio.

Meetings are held on the first Wednesday of every month at Wireless Hill starting at 8 pm. The meeting format alternates - a formal AARTG meeting one month, then an informal meeting on Packet Radio - topics the next.

This method is very popular due to the ever increasing percentage of the 85 current members who are getting into Packet Radio.

The group operates a RTTY repeater on 147.050 MHz (+ ve offset) which is located at Tic Hill, in the Darling Ranges, north-east of Perth. This assures excellent coverage.

A RTTY Bulletin board system is available through this repeater by sending a special series of commands to activate the service. The group is now working on a Packet Radio digipeater - VK6RDT, which should be fully operational very soon. The allocated frequency will be 147.575 MHz initially.

After this, the group will be seriously considering linking the RTTY and Packet Radio Bulletin Boards so that all news and data stored in either BBS will be available on either mode.

The group conducts its own News Broadcast every Sunday evening at 1830 hours local time through the RTTY repeater and on 3.535 MHz in the 80 metre band.

Callbacks on 2 metres are on 146.600 MHz.

The group also publishes its own very informative newsletter which really is a must for anyone interested in keeping up with the latest news and technical information available both locally and overseas.

If you have a need to know, contact any of the following office bearers -

Pres.	Phil Maley	VK6AD
V. Pres.	Frank Taylor	VK6JK
Sec.	Joe Nevin	VK6ZTN
Treas.	Bruce Robson	VK6ABR

Correspondence can also be sent to the group via Packet to the Secretary, VK6ZTN at VK6BBS, or to PO Box 97, Cannington, 6107.

And don't forget - if you need a TNC to get going on Packet, contact Joe, VK6ZTN for a circuit board. All components are available off the shelf for these latest technology units, so don't procrastinate any longer - get into DATA mode in '89!

Queensland Division

Precis of the Annual Report, 1988/89

Prepared by the President, David Jones, VK4NLV

1988 was a year of considerable activity in the WIAQ, and parallelled the great excitement engendered in our Community by our Nation's Bi-centennial Celebrations. These celebrations helped focus our attentions on our past history, and the inevitable errors made, and firmed your Council's resolve to make the future better for us all.

Expo 88

The undoubted highlight of our year was the

staging of World Expo 88 on the south bank of the Brisbane River. It is now past history that Amateur Radio was not officially represented at the World Fair, and that in itself is a sorry, but already documented tale, especially when the theme of Expo was "Leisure in the Age of Technology". It is to the credit of the many amateurs who involved themselves in our Expo effort, particularly John VK4QA, Theo VK4MU and Murray VK4AOK in the early days, and Eric VK4NEF and Roy VK4BAY in the operational stages, that VI88XPO was the unqualified success that it undoubtedly was. For Eric's marvellous effort in keeping VI88XPO on the air, he was awarded the "Distinguished Service Award".

Bi-Centennial Celebrations

There were several events, organized on a local basis, involving clubs and the public at large. Two good examples were to be found with the Oakey High School and the amateurs in Innisfail under the guidance of Felix VK4FUQ. All of these made for good public relations, and many new prospective amateurs came to light.

Co-incidental with these activities was the operation of the special callsign VI88QLD, which was well co-ordinated by Theo VK4MU. Most clubs in Queensland availed themselves of the use of this callsign, and promoted both the Bi-centennial celebrations and Amateur Radio. VK4AWI was replaced with VI88QLD as our News and Information Station.

Examinations/Devolvement

In the past year, DOTC has moved further towards devolving itself of the responsibility for Amateur Examinations, and much was done by clubs and individuals to prepare themselves for accreditation. Ron VK4AGS and Aaron VK4AHO have established the data base and are now ready. DOTC has recently appointed an Examination Officer, so action in this area should now be only six months or so away.

Awards

It was felt that the two tier structure of only Life Membership and Merit Badge did not allow much scope for officially recognising our many volunteers. Anne VK4ANN was asked to prepare a Distinguished Service Award, one which could be given approximately four times per year to deserving amateurs. Awards last year, were made to the following:

Merit Badge #29	Gordon LovedayVK4KAL	10 yrs of IARUMS
DSA #1	Anne Minter VK4ANN	Bookshop, RCC
DSA #2	Ken Ayers VK4KD	WICEN
DSA #3	Eric FittockVK4NEF	VI88XPO Service

Congratulations to all recipients - you've continued the very selfless essence of the Amateur spirit.

Treasury

Over basically the last six or so years, Ross VK4IY has done a magnificent job as our Treasurer, and his efforts have seen a near 50% rise in our assets, from the low $40,000 to our current status of around $60,000. However, the members should note that this doesn't mean we have funds to burn. We have various amounts invested in a variety of interest bearing funds, which mature at a variety of times, but it would only take a bad tower case or other such calamity to see our reserves sorely tested.

Ross has now officially resigned as Treasurer after his many years of dedication, and Eric Fittock VK4NEF has volunteered to take over the reigns. Eric will settle in to his new job as soon as the books are returned from our Auditor, and so we all wish to thank Ross most sincerely for the marvellous contribution he has made, and thank Eric for that which he is about to do.

Future Planning

It was becoming obvious that with the vast increase in workload by Council, more meeting time was needed as we would frequently arrive at 2230K, with General Business not yet started. So a planning meeting was held at my QTH on 21/1/89, to look into our administrative procedures, and to further refine our longer-term goals. This meeting went for some eight hours, and was a low-key affair, with a BBQ during the evening session. These meetings will be held on a more regular basis, probably three per year.

Radio Club Conference.

Always one of the highlights of the year, and this one was no exception. Hosted by the CQ Branch and well chaired by Rob VK4TKA, some twenty-six clubs made their way to the Queensland Recreation Council Camp at Cooee Bay, near Yeppoon. A hired bus took most of the delegates up from Brisbane, and our special guest, Terry Carrell ZL3QL, President of NZART, joined us in Rockhampton.

This was a "boots-n-all" conference, conducted in an atmosphere of conciliation, and everyone involved is to be congratulated for their very positive input. Terry summed up the situation in his report in "Break In", June 1988, by writing - "One could not attend this two-day event without being impressed with the desire of everyone to co-operate and compromise..... it was the way in which all ages of amateur radio were represented, with a will to see the growth of the WIA and the amateur service.....their very willingness to discuss the nuts and bolts issues will stand out in my mind for years to come....."

CQ Branch, take a bow.

Divisional Liaison

As the WIA is now going through a period of conciliation - in other words, listening more to what others have to say - I have opened a line of communication with Roger Henley VK2ZIG, President in NSW. This has maintained an important link with the largest division and confirmed that we all basically have the same problems. We have also started swapping news tapes with VK3 in an effort to keep abreast of their situation.

This type of liaison should be fostered in the near future, with a view to further increasing the feeling of national unity which we see as being so important to our future.

A considerable amount of liaison with the Federal office was also undertaken, mainly in an effort to ensure good service to members. Those of you who have contacted me needing service would, I hope, have been as impressed as the Federal office is, with the standard which we are trying to establish.

Public Relations

There are various areas involving PR, and we are indeed fortunate that we have access to a professional PR firm, at the "parentally" right price. Murray, VK4AOK, has put in considerable effort to produce a range of brochures and leaflets. When these are rationalized for national use, they will be produced.

ASIANET Sys Ops Conference: 2nd - 4th September

This Packet Conference was held at the Gazebo Motel in Brisbane, and was well organised by Brian VK4AHD. It was attended by a "who's who" of HF BBS operators, from Japan to New Zealand.

The Conference aim was to bring together all those involved in HF BBS Sys-ops, with an aim of discussing and agreeing on HF Packet forwarding Policies, Rules, Techniques and agreeing on an HF Packet Band Plan Proposal, with a view to the forthcoming Region III Conference in Seoul.

To say that it was an unqualified success would be an understatement.

Well done, Brian!

Membership

Whilst we have a reasonable percentage of amateurs as members, your Council's aim is to achieve a 10% real growth. As a start, we have created a competition among clubs in an effort to boost membership prior to our 1988 AGM.

The WIA is the only body recognised as being representative of the ARS., yet it currently has less than 50% membership. We believe that lower fees are not the answer, as that will also mean lesser services, and poorer levels of representation with DOTC and IARU - highly undesirable. Members, it's up to you. Fee rises can be forestalled by acquiring more members. Won't you help?

Future Direction

There is currently much discussion regarding the future of Amateur Radio. We do not hold high hopes that WARC 1992 will treat the ARS. as well as we were treated in 1979, and so it behoves us to ensure that we are properly prepared, and that all levels of volunteer staff properly understand the needs and thoughts of grass roots amateurs. And this is where you come in.

Please tell us what you want! This Division spends more than half of expenditure in acquiring member opinion (eg. QTC/RCC) yet we desparately need more.

A member survey may yet be needed, but would enough members respond to give us an accurate picture of member needs? It's up to you.

The Federal Office, under the great leadership of Bill Roper and, now, also Ross Burstal, is genuinely having a marvellously positive effect on the membership at large.

It is time that we started to act as a co-ordinated, national body, with common goals and with a feeling of national unity, instead of the divisive, secular manner in which we have operated in the past.

It's up to us, collectively, to take control of our

future - it cannot be left to the regular few volunteers. To the silent majority, I ask - How about it? Won't you join us?

VK3 Notes

Bill Trigg VK3PTW
Vic Div, 38 Taylor Street
Ashburton 3147
Phone (03) 259 9261
Fax (03) 259 9298

Sunday News Broadcast (VK3BWI) 1030 hrs on 160, 80 and 40 metre bands, FM repeaters 6 and 2m and 70cm.

VK3 Education Officer Steps Down

For the past ten years Fred Swainston VK3DAC has been a theory instructor and was Education Officer for the WIA Victorian Division.

Fred has decided to step down from both these positions to have a rest.

During his decade of theory instruction for both the novice and AOCP, Fred innovatively pioneered revision weekends. He also authored Australia's first and only theory textbook written for the Department of Transport and Communications syllabus.

I am sure you will all join with the WIA Victorian Division Council in expressing appreciation to Fred for the job he did so well, and wish him all the best in the future.

WIA Membership Application Forms.

New application forms to be used by those seeking membership of the WIA are now available from the Victorian Division Headquarters.

Any club, individual or retailer of amateur radio equipment who would like a membership application form or forms can obtain them on request to the Divisional Secretary.

Book Officer resigns

One of the people working behind the scenes for the past fourteen months has been Jan Swainston who ran the Divisional Bookshop.

The sale of books at discount prices is a WIA membership service. But while members can buy books at prices much lower than available elsewhere the Bookshop must also show an operating profit.

In the 12 months to December 31, 1988, the Divisional Bookshop under Jan Swainston made a profit of $2528. Jan has resigned from the position after doing an excellent job; thank you Jan for your contribution to the members of the WIA.

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Portable or back-up battery use

From Page 11

Charging on the Move

You may think that the charging system on the car will give the battery a good charge but this is not the case. The charging system on the car can and does deliver very high currents for a short period of time. Thjis has the effect of quickly surface charging the battery to 13.8 volts or more. At this point the vehicle's voltage regulator reduces the charging current to almost nothing. The following example quoted to me concerned a four-wheel drive vehicle. The battery was flattened in Mildura and the vehicle was jump-started. It was then driven back to Melbourne during the day. The next morning the battery was checked and found to be only half charged. A spell on a good battery charger restored the battery to full charge. The vehicle charging circuit was checked and found to be in perfect working order and the battery was also in good condition. The way out ot this would be to have a second regulator which could supply four or five amps over the load being drawn by the vehicle which could be reduced when the battery had recovered.

Like so many other fields today, the wet cell has changed at the hands of technology. Every application has a set of special operating conditions and the battery manufacturers are trying to satisfy them all and still make a profit. The primary use of the automotive battery is to start the car and then the alternator takes over the work load. The electric vehicle uses physically large cells which charge over night and work all day. The solar power application is engineered to be able to supply a great deal more than the expected demand of the installation. The Deep Cycle amergency battery takes a long time to charge and give moderate current supplies.

The wheel is turning full circle as the current demands in our electronic gadget equipped vehicles make more and more demands on the electrics. In days gone by, the battery would take you safely home should the alternator fail at an inopportune time. You could look to covering a 100 miles or more, however the car of today, with its fuel injection, electronic ignition, electric fuel pump and other essential management systems would be lucky to cover 30 kilometres before the discharging battery gave up. So the designers are working hard to try to devise an inexpensive but efficient version of the heavy plate battery of yesterday.

So there it is, some broad views on batteries in amateur use and some of the pitfalls. As I stated at the start, I had great difficulty getting any printed information while researching the above. The foregoing is based on information gained by speaking to people in various areas of the battery industry from sales staff to technical researchers.

$50 FOR FRONT COVER PUBLISHED PHOTOGRAPHS

A short history of communications

Ted Roberts VK4QI
38 Bernard Street, Rockhampton North, 4701

A lighthearted review of messages and their handling from the caveman era to WICEN, SES and ATN. The strong influence of military need on the evolution of technology is a major theme.

Communications may be defined for our purposes as the medium and techniques of passing information from one person or organisation (the originator) to another person or persons known as the addressee/s. In order to ensure the correct operation of a communication network it may be necessary for messages to be originated and passed within the network, but normally the job of communicators is to pass the messages between originator and addressee speedily and accurately. The god of messengers is Mercury, usually depicted with little clothing and winged feet. I often wonder if the wings on his feet are to cool them after a number of lifetimes as a runner.

Back in the caveman days no need existed for third party traffic between A and B as they were living as a tight-knit group and were able to maintain an 'eye-ball' contact when necessary. An irate caveman brandishing a massive club and pulling nasty faces carried the message to the addressee very accurately unless he was a fool. Come to think of it, there are still plenty of fools acting as addressees but the punitive measures our caveman used either deleted the addressee from the call book permanently, or he eventually came back on the air having learned to read the message accurately.

The first person reportedly using space communication techniques was Noah when he received instructions to build the Ark, and his use of a dove to signal when the Flood has ended was about the first recorded use of pigeons or birds as message carrying media.

As time passed, and the size of our caveman groups expanded, the need arose for a third party to be used to carry messages from one to others of the group. As no new-fangled means of communication existed then, it was necessary for person C to carry the message between A and B. Down through the centuries this person became known as a runner and still exists in the army as Battalion or Company runner, etc. One of these runners, Pheidippides, carried the news of the Battle of Marathon from there to Athens or wherever, then collapsed and died from the exertion. His exploit is forever remembered in the name of the Marathon event in the Olympic Games. The Incas of South America developed a very efficient method of message carrying by runners. This was necessary in their case because of their lack of beasts of burden and their introduction to the horse only came when the Spanish Conquistadores used them to destroy their remarkable civilisation.

As the population explosion continued and our group left the tribal state behind and became regional groups and then countries and nations, the need for speedy communications became correspondingly greater. Fortunately, by this time man had domesticated the horse and was able to mount his messengers with an increase in speed and, by staging from point to point by changing horses frequently, messages were able to be passed over long distances quite speedily.

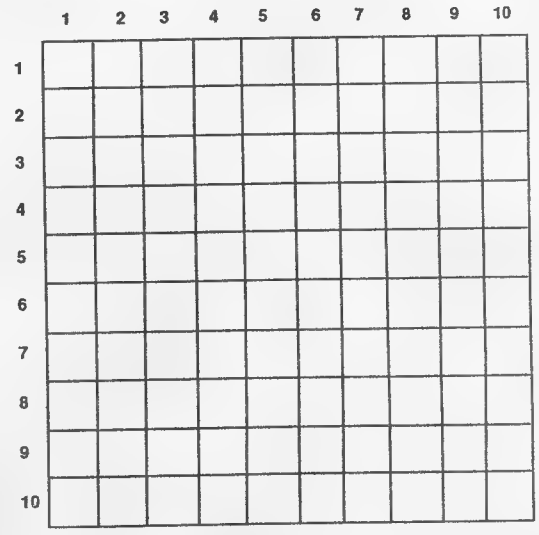
This practice of changing horses at posting houses (usually inns also) was in use until late in the 19th century and served the population very well. The ordinary traveller was able to change horses at these establishments as were the mail coaches and, from this beginning, we derived the name of the Post Office. One of the famous names of DX performance using this mode was the American Pony Express. Who has not heard of Paul Revere's ride warning that the Redcoats were coming!

The need for accuracy in the transmission of the message is of major importance and will be mentioned frequently. It is very obvious that the whole energy expended in getting a message from A to B is wasted if it arrives corrupted or inaccurately transmitted. While these early systems were as speedy as the existing techniques allowed, the accuracy was often debatable. For a start, accuracy was dependent on how well the messenger understood and remembered the message first passed to him by A and, how well it was understood by B when it was finally told to him. Further complications set in when the message had to be relayed through other messengers necessary in 'DX' or long distance messages. In addition, there was the possibility of deliberately falsifying the message for monetary or political gain and the damage could well be done before the originator was aware of the messengers' action. Both of these problems are still with us to the present time, as witness the deliberate 'leaks' of confidential matters from the Public Service and

Clues to Morseword 25

ACROSS
1 Take flight
2 Letters
3 Marsh
4 Donation
5 Very dry
6 Some time ago
7 Moves
8 Worn by a baby
9 Faucets
10 Eat the evening meal

DOWN
1 Ewer
2 Steal
3 Unable to hear
4 Leases
5 Mink, for instance
6 Salver
7 Flame
8 (4x5) - (3x2)
9 That is (Latin)
10 Urn



Solution next page 67.

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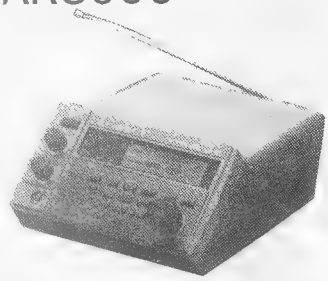

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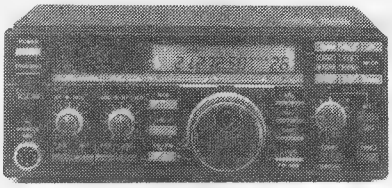

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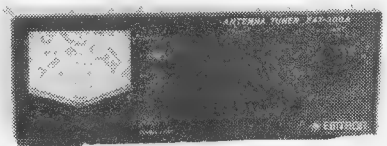

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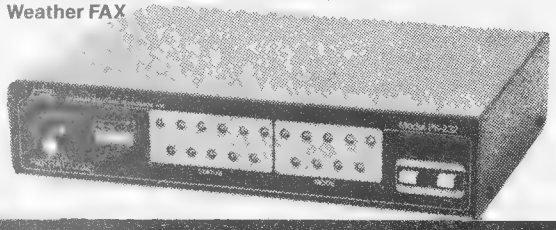

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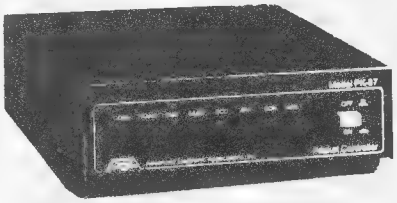

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political party decisions; quite often intended to gauge public reaction. I hasten to point out that these people are very rarely in the message handling category but are 'trustworthy' people in confidential positions.

The need for speedy transmission for the spoken word is well demonstrated by the use of Staff Officers in the Army to convey the orders of the Commanding General to his subordinate commanders during the progress of a battle. These gentlemen or 'Despatch Riders' galloped blithely through shot and shell to advise Regimental Commanders that the General required such and such action to be taken immediately. If the Staff Officer, through 'thickness' or misunderstanding in the heat of action passed on the wrong message, then bungles of various degrees of magnitude occurred. The classic combination of thickness and misunderstanding gave rise to that gallant but unnecessary action known as 'The Charge of the Light Brigade' during the Crimean War.

With the advance of education eventually Senior Officers learned to read and write, the written word took the place of oral messages and some improvement was noted in the orderly conduct of that most disorderly military function known as the battle. Eventually, this carriage of written commands reduced the need for Staff Officers to carry messages and interpret (hopefully correctly) the obscure thoughts of the General Commanding.

The introduction of more modern aids to warfare such as the motor cycle and motor vehicle took the message carrying out of the hands of the Staff Officer in general and this duty became part of the Signals Corps or Regimental despatch rider service. The fact that the invention of the machine gun and the much heavier use of artillery were contemporary with this development may have had some influence in this decision as it was now necessary to ride through much heavier and more lethal showers of shot and shell to deliver the messages. The sum result, however, was that the large number of Staff Officers were left with nothing better to do than plague the life out of the rest of the Army; which role they exercise to the present day?

The role of the messenger has not always been an easy one, particularly on the diplomatic front. Due to the long delays caused by distance and slow systems used, it was not unknown for the message to arrive after the action requested by it was no longer required. Imagine the frustrations of a Governor of a Colony suddenly finding he was at war by an attack from another country who had quicker advice than he did. It was only to be matched by his frustration when his forces fought and won a decisive victory after the original war had been finished and he found himself incarcerated in the Tower because of poor communications!

On the diplomatic scene, and, in fact, the ordinary message delivery scene, it was not uncommon for some addressees to indulge in a little idle amusement when they received unwelcome news or ultimatums. As this amusement usually was centred on the poor messenger and his demise, sometimes agonisingly slow under torture, or the forcible removal of his tongue so he could never pass such a message again, it is a constant source of amazement to me that there was an ever present supply of messengers available. Maybe the Chief 'volunteered' them for the service when he had one eye on their wives or their estates after their failure to return.

Throughout the ages, numerous attempts were made to improve the speed of message handling and to bypass the inherent dangers of the messenger service, including waylaying and killing, to abduction and forcing the betrayal of the message under torture, down to the mundane problems such as being shot by highwaymen, eaten by packs of wolves, and death by fire or flood as well as intolerable delays. As no sophisticated devices then existed, these early methods were almost invariably based on some form of visual signalling. An early device was the use of bonfires to signal raids on the coast by Norsemen or similar groups. This probably is one of the earliest uses of digital communication as there were only two states of the signalling medium – lit or not lit! Not to be compared to present day binary systems however. This method was used to signal the sighting of the Spanish Armada in the English Channel in the days of Elizabeth 1.

Shapes (cones, balls, etc) were used at times but the cumbersome nature of the devices and difficulty of designing enough distinctive shapes to form an alphabet ruled this method out for general use.

The Australian Aborigines are credited with some form of very primitive smoke signalling. This form of communication was brought to its highest standard by the American Indians if my favourite Indian stories as a schoolboy are to be believed! The system depended on the Indian operator 'keying' the carrier – a column of smoke – by interrupting it with complicated movements of a blanket through the smoke column. Note that the operator never had to pass a Morse test to get his licence! One major spinoff of this technique was the destruction of numerous vermin which inhabited the blanket, which brings up the question, 'Was the signalling a by-product of attempts to kill the lice?'. One of the inherent problems with this mode was the loss of propagation during the night time and the problems that arose in rainy or foggy weather.

While our cavemen were becoming more civilised they spread their attention to the waterways of the world, from rivers and lakes initially, to the seas, and then to the mighty oceans. Boats and ships were used to carry messages almost from their interception but they remained out of communication from the time they were out of sight of land until they made their next landfall. If they were operating as a fleet it became necessary to heave to, launch ships' boats and assemble all captains for changes in plans or operational orders to be passed. Obviously something better was needed for intercommunication whilst at sea and if it could be done while the ships were underway so much the better.

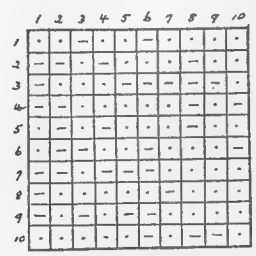
Communication with coast stations was tried using shapes but these soon gave way to a much more versatile system of flag hoists which was also well suited for use between ships whilst at sea. During the Napoleonic wars the French were experimenting with a form of mechanical semaphore with some success. This system was also usable with two flags and is still used today. One of the main reasons for the ability of the Royal Navy to remain such a decisive maritime force for so long was the very highly developed and efficient signalling system in use. They were able to pass commands and information right up to the time of engagement in action, and probably during the action itself.

To be continued next issue

MORSEWORD 25 SOLUTION

Across: 1 flee 2 mail 3 bog 4 gift 5 arid 6 past 7 goes 8 bib 9 taps 10 sup

Down: 1 jug 2 rob 3 deaf 4 rents 5 fur 6 tray 7 fire 8 '14' 9 id est 10 vase



Silent Keys

We regret to announce the recent passing of:

Mr Henry Pearce	**VK3EN**
Mr Ronald Guttormsen	**VK4RL**
Mr C.P. Pfrunder	**VK4KBR**
Mr WJ Hornidge	**VK6KBP**
Mr Jim Kirk	**G6ZO**

Jim Kirk G6ZO

To his many friends around Australia, I have to announce with deep sorrow the passing of Jim Kirk G6ZO. He died on February 8th, 1989 after an illness of several months. His outstanding CW signal will be missed by many of us. On behalf of all of us, I have sent sincere condolences to his wife Denise and family.

Frank W Bird VK6ZE

OVER TO YOU

Bangladesh Appeal

Dear Sir,

Greetings to you from Bangladesh. I am General Secretary of a DX Club here. You will know that S2 (Bangladesh) is a rare DX country. But now our club is trying to get an operating licence.

Some months ago I talked with our Communication Minister about licensing while he visited our club during the last devastating flood. This emphasised the necessity of amateur licensing in Bangladesh. Our area was cut off from any kind of communication during the flood for 7 days. He assured me he would do what he could in our favour. Perhaps we would be able to set up a S2 station this year.

Amateur Radio publications are very very short in our country. What we had we lost in the flooding of our club office and library. So now we seek your kind co-operation to publish an appeal in your esteemed journal on behalf of IRLC. This would be very much appreciated.

International Radio Listeners Club in Bangladesh is trying to get a licence from the Authority. That is why it seeks your help in this regard and also would greatly appreciate your used radio publications for use in the Library. This Club has lost everything in the flood last year including all library books. Any help would be very much appreciated.

Letters should be addressed to:
International Radio Listeners Club
Konabari, PO Nillnagor-1346
Dhaka, Bangladesh.

Taimur Rahman
General Secretary
International Radio Listeners' Club

Still on Amateur Scene

No doubt many of your readers are aware of Electronics Australia, and its former incarnations Radio, TV and Hobbies, Radio and Hobbies and perhaps even Wireless Weekly. Under one or other of these names, it's the oldest commercial radio/electronics magazine in Australia, and one of the oldest in the world. In the past we have also had close links with the amateur radio movement, due of course to the efforts of my illustrious predecessors Ross Hull, John Moyle and Neville Williams.

I suspect, however, that events of the last few years have led at least some of your readers to conclude (not unreasonably) that Electronics Australia is no longer interested in amateur radio, or in publishing amateur radio news or projects. I should like the opportunity to correct this impression, which nowadays at least is anything but true.

It's true that the magazine went through a rather difficult period a couple of years back, culminating in the departure of the editorial people who had been responsible for the magazine following my own departure in late 1979, and the retirement of Neville Williams in 1983. And during that time, there may not have been a great deal in the magazine to interest radio amateurs. But since I returned to the editorial chair in mid-1987, the new staff and I have been spending an enormous amount of effort in returning it to its former pre-eminent position. I'm happy to say that we've been fairly successful, too, with circulation and readership both climbing again.

However it pains me to admit that there still isn't any significant amateur radio content in the magazine. But this is NOT by choice, or because of some kind of deliberate anti-amateur radio policy. Far from it. It's simply because (a) I have so far been unsuccessful in finding anyone willing to commit themselves to writing a regular amateur radio news column; (b) there have been virtually no amateur radio projects submitted to me, for publication; and (c) we haven't as yet been able to develop any amateur radio projects ourselves - some things take a little longer!

Points (a) and (b) seem particularly ironic, because I suspect many amateurs have been sending details of their projects and achievements to our smaller competitors, because they think I wouldn't publish them.

So can I please stress that I'm very keen to receive articles on amateur radio projects or achievements, and to help promote the interests of amateur radio - particularly the experimental side. Even though I don't for one moment put myself in the same league as Ross Hull or John Moyle, I am a limited call myself (albeit not very active nowadays, alas), and I do want to restore the traditional links between the magazine and radio amateurs.

Of course as Australia's largest-circulation electronics magazine by far, with more readers than most of the others put together, Electronics Australia is surely an excellent medium through which to reach not only amateurs, but also potential amateurs as well. We also pay an appropriate publication fee for material we use, and are prepared to 'knock it into shape' if the contributor isn't in a position to supply a fully developed story.

I hope the foregoing helps to correct any misunderstandings, and I look forward to being inundated with material.

Jim Rowe, VK2ZLO
Managing Editor, 'Electronics Australia'

Contests Continued

I guess I left myself open with my previous letter on contests. I was not prepared for the personal attack on my character, however and one thing I detest is the usage of "letters" columns in magazines for personal disputes.

In this case, I must reply to Mr. Luther's letter in the March edition of "AR" lest your readers be led into believing that I am a young, just-licensed operator, with a "grudge".

Nothing could be further from the truth.

I have been an SWL and Ham operator for over twenty years and my opinions on contests were formed when I happened to strike one on forty three years ago. The band (from 7030 kHz and up) was "wall-to-wall" contestors. There was not even ONE HERTZ for "normal" QSO's.

It was then that I started to consider writing a letter to "AR".

Nothing happened until a "big" contest on twenty. When I could not find any room on the band, that's when I compiled my letter.

My opinions on contests have not changed since my last letter (nor will they ever change) no matter how many of my fellow amateurs "attack" me.

As a parting thought, may I pass on this remark heard on forty recently: "I never go on 20 any more. The band is always full of people exchanging numbers".

I rest my case.

Terry Robinson VK3DWZ
21 Russell Avenue
Woodend. 3442

Channelization of Amateur Bands on MF & HF

1. I wonder what would happen if Australia were to try for these two changes in International Amateur Radio viz.

(a) on SSB on M/F and H/F to use USB as the sole mode?

(b) to use on M/F and H/F both CW and SSB on discrete channels?

2. I would envisage allocations on the 80 metre Amateur Band between 3500 kHz and 3625 kHz to follow a pattern similar to this CW: Channel width: 2 kHz. Centre frequencies (carrier frequencies) to follow this pattern.

Ch1 3502 kHz
Ch2 3504 kHz
Ch3 3506 kHz
" " 17 Channels
Ch 17 3534 kHz

SSB Channel width 5 kHz. USB mode. "Carrier frequencies" to follow this pattern.

Ch1 3535 kHz
Ch2 3540 kHz
Ch3 3545 kHz 19 Channels
" "
Ch19 3625 kHz

3. Reasons for the Proposal

I Use of USB on 160m, 80m and 40m would have amateurs conform with professional practice on M/F and H/F eg Maritime radio and Aeronauticall Services.

II A 2 kHz channel bandwidth on 80m CW would give a better opportunity to novice

operators using CW, few of whom possess a 500 Hz or 600 Hz CW xtal filter and must use, for CW reception, the 2.7 kHz SSB filters in their transceivers.

III Channel operation on 80 metres would give:

(a) A better chance to monitor a definite channel for weak signals and/or possible skeds.

(b) the opportunity to enter one to ten frequencies in the memory bank of a modern transceiver which has memory scanning facilities and thus make it possible to guard up to ten channels at once.

(c) this memory scan facility could be used for monitoring up to ten channels in any mixture of CW and SSB.

(d) apart from this, memory scan on 80 metres would appear to the writer to have very little use - if any - for Amateur Radio Operation, nice as it may be for monitoring non-amateur stations transmitting on fixed frequencies.

4. The Amateur Radio Service use of discrete channels works most satisfactorily in the Amateur 2 metre FM band. Admittedly the 2 metre Amateur band is 4,000 kHz wide and the 80 metre Amateur band is 200 kHz wide. Yet the 27 MHz CB band works most satisfactorily with 40 channels (both AM and SSB) each 10 kHz for a total bandwidth of 400 kHz.

John Robinson VK2AEW
203 Tryon Road
Lindfield 2070

Reminder Notices

AR is now following the irresponsible methods used by Government and big business in not sending out a renewal reminder for overdue subs.

Can the WIA guarantee delivery of the "First and Final Notice" in the post? Without fail?

Stopping the magazine earlier as you have done, should be sufficient deterrent to those persistent 'late payers'.

Please remember when you are hell bent on saving 'our' money, there's a point when 'efficiency' reaches the ridiculous and becomes unproductive. So what if a few reminder notices cost a few bob? This is a 'service' to us readers you know, so just leave it as part of the overheads. We pay for it - not the WIA! If I don't get a subscription notice next year, I will not be renewing! The name change from FIRST/FINAL NOTICE to FIRST/ONLY NOTICE (AR Feb) changes nothing.

Also I wonder at the new system of 3 year subs. With inflation, the cost of subs will rise in years 2 and 3 but actual subs received will be static based on Year 1, possibly depleting funds in years 2 and 3.

If you need to bribe people to retain their membership, then you should take a look at yourself to see what you are doing wrong (Ancient proverb).

Arthur J Trevaskis VK7SE
RSD 1745
Penguin 7316

Loss of 50cm Band

It is with sadness that I note the announcement in "AR" of February 1989 of the withdrawal of the 576-585 MHz Amateur Band (apart from existing ATV Repeaters which "can continue to operate until the frequency band is required for the respective area").

Although, as an amateur RADIO operator I suspect that the average RADIO ham will scarcely miss the loss. This is because there hasn't been any commercially built radio equipment available for the band and, not withstanding the published band plans for 50cm (see page 25 of AR February 1989), to my knowledge there has been no RADIO activity on 50cm since the days of Modulated oscillators and Super-regens!

But to amateur TELEVISION operators the loss of 50cm is little short of tragic because it is the ONLY band that can be tuned on a normal domestic TV set. In the same way that many present radio hams got their start by tuning across the short wave band on the family radiogram, many present ATVers first saw ATV while tuning the family TV receiver or video recorder into SBS, etc.

The classic argument for nation-wide (or even world-wide) amateur radio bands has always been that these provide the opportunity for experimentation in long distance two-way communication. But this has never been a feature of ATV operation on 50cm due partly to its use for the output channel of ATV repeaters (at least in the State Capitals).

Instead, the value of 50cm to ATVers has always been in its accessibility. In losing 50cm, ATVers lose accessibility.

I can well appreciate the difficulties facing the spectrum planners in accommodating requests by amateurs for a nation-wide UHF allocation. I can also understand the difficulty in pre-assigning a channel for ATV operation in every single locality in Australia.

But is it too much to ask of the Regulatory Authority that wherever an ATV Group applies to install a UHF ATV repeater that their request for allocation of a UHF broadcasting Channel for that locality be given serious consideration alongside other legitimate users?

In many ways ATVers would find such an arrangement preferable to a single nation-wide allocation in that it would enable cross-linking of nearby ATV repeaters without the use of spectrum-hungry users?

Of course, if we were accepted alongside broadcasters, our ATV repeater transmitters would have to meet the same spectral purity requirements as they do. But I don't see this as an insurmountable problem as it applies only to the repeater transmitters themselves, not to the individual users' transmitters.

Indeed, because of the much lower power of ATV transmitters, the reduced requirement for protection of the ATV service against interference from other services, and the fact that ATV repeaters are generally sited away from other TV transmitters, a case could be made for relaxation of the normal 21 MHz spacing between adjacent channels in the case of channels allocated to the amateur television service.

In my opinion, there is another reason to keep one foot in the UHF door!

The next 20 years could well find a move away from terrestrial TV broadcasting and towards direct satellite broadcasting (DSB); developments in spectrum-hungry high definition TV and 3D television would demand DSB; and the TV broadcasting industry with its recent moves towards agglomeration and networking, while requiring more channels now, could well be better served in the long term by DSB.

If we can retain our rights of access to the UHF broadcasting band now, it could well strengthen our hand in negotiating with the authorities against the ever spectrum-hungry radio-telephone services if and when UHF channels again become free as a result of the move to Direct Satellite Broadcasting.

But notwithstanding all of the foregoing arguments, I cannot finish without asking why is it that New Zealand can allocate 614-620 MHz to ATV repeater operation but Australia cannot? The Australian Table of Frequency Allocations shows this section as Broadcasting - Primary and Fixed and Mobile - Secondary. To my knowledge no broadcasting allocations have been made below 620 MHz. Is the band actually in use anywhere in Australia? Why shouldn't it be allocated to ATV repeater output operation where possible?

And what about the new 902-928 MHz amateur allocation recently made available in the USA? While it doesn't quite satisfy the requirement of being readily receivable on a domestic TV set, there is a steadily increasing range of ATV down-convertors and transmitters available at reasonable prices from the States. This must be a WIA item for bargaining at the next WARC!

John F Ingham VK5KG
37 Second Ave
Sefton Park 5083

(We agree with every word, John; and all the aspects you mention are essential to our ongoing negotiation with DOTC on this subject, which is on the agenda for every WIA/DOTC meeting. Ed)

Restraining Smokers

I am loathe to raise yet another divisive issue, but I feel that you (plural) have a right to know why I feel sufficiently disgusted and repressed to begrudge the W.I.A., and the local radio club my membership subscriptions.

My wife is a chronic asthmatic of long standing and is therefore used to being denied access to facilities where smoking is permitted. I am not, but with advancing years and declining health I, too, am finding a decline in my tolerance to passive smoking with the result that attendance at radio club meetings has gradually become at best an uncomfortable evening or, at worst, a night and following morning of severe discomfort and sometimes illness.

In order to continue with my club activities I therefore requested/proposed/moved that club meetings should be held in a strictly non–smoking environment.

HAMADS

TRADE ADS

AMIDON FERROMAGNETIC CORES: Large range for all receiver and Transmitting Applications. For data and price list send 105 x 220 millimetre SASE to: **RJ & US IMPORTS,** Box 157, Mortdale, NSW, 2223. (No inquiries at office please ... 11 Macken Street, Oatley). Agencies at: Geoff Wood Electronics, Lane Cove, NSW. Webb Electronics, Albury, NSW. Truscott Electronics, Croydon, Vic. Willis Trading Co, Perth, WA. Electronic Components, Fishwick, Plaza. ACT.

RADFAX2: Hi-Res radio facsimile morse 7 rtty program for wIBM PC/XT/AT on 360K 5.25" floppy & full Doc. Need CGA, input port, SSBhf FSK/Tone decoder. Has re-align auto-start view save print. Also "RF2HERC" same as above but suitable for hercules card, and "RF2EGA" for EGA card (640X350 mode). Programs are $30 ea. plus $3 postage only fromwM. Delahunty 42 Villiers St. New Farm 4005 QLD. Ph: (07) 3582785.

FOR SALE – NT

ICOM IC271A 2 mtr all mode TRCVR mint cond. $1000. ICOM IC471H 70cm all mode 90 watts mint cond. $1500. Jeff VK8GF QTHR Ph: (089) 522388 WK (089) 521016 AH

FOR SALE – STH AUST

YAESU MOBILE ANTENNAS for15m, 10m, & 2m including gutter mount. All in mint condition,used only a few times. $75 ono VK5KBE Ph: (08) 2507259

FT757GX & MIC/HBK $1300.AM/FM clock radio/alarm 120x25x55mm new, $45. Sony WA55 2 Band Stereo cassette – corder, good $50 & manual. 2, Dick Smith 1W, 3CH, 27 MHz W/T's, $30 ea. Assorted components also.Mark Loveridge VK0ML/5ABBC/- 18 Yorktown Crs. HenleySth 5022 Ph: (08) 3561120

ANTENNA TH3 HI–GAIN (SENIOR) Good order needs seals & some bolts. $225 ono nine years old Ph (08) 2987761VK5WB after 5PM.

SWAP SALADMASTER COOKWARE SET: 21 piece, 5 ply stainless steel, brand new, never used – for a late model HF or VHF Transceiver. Will pay cash difference. VK5KBE Ph: (08) 2507259

WANTED SA

MANUALS or copies, plus ham and general software for Sorcerer computer. Any info. appreciated VK5AW QTHR. Ph: (085) 835469.

FOR SALE – QLD

KENWOOD TS180S HF Transceiver WARC fitted $650 VFO180 $100. Power supply PS30 $300 Hidaka 5 Band vertical $120 PK64 modem packet RTTY amtor etc HF VHF $595 VK4AI QTHR Ph: (07) 2845688

YAESU FT290R All-mode 2M TXVR carry case NICADS mobile bracket plus Tokyo HL35V amp with gasfet pre–amp $790 Frank VK4KFB Ph: (07) 2883662

KENWOOD TR2400 2MTR H. Held NI-Cads fast charger s/c case belt clip two antennas remote mic G.C. $300 ono VK4AIF (07) 2849230 Clontarf

FT224 2MTR FM MOBILE TRANSCEIVER Solid state XTAL control 4CH supplied manual included good order $200 VK4KAL QTHR.

DSE UHF WATT METER Surplus to requirements V.G. order $45 VK4KAL QTHR

SIGNAL GENERATORS: Marconi TF144H/4 10K72MHz Mint $250 Metrix 931H 50K/50MHz $100, Ratcliff 205 45/180 MHz $100 wanted Drake equipment and tubes Bob VK4OY QTHR (07) 3960886

YAESU FT1 including YAESU external speaker & YAESU desk mike. Recently prof. service checked. $2200. Will consider near offer. John VK4SZ QTHR Ph: (070) 613286

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KENWOOD TS430S HF Transceiver handbook, AM and FM options. EC $1100 VK4ASB QTHR (07) 2633872 AH

WANTED – QLD

70cm Allmode transceiver VK4ASB QTHR (07) 2633872 AH

BOOKS 'SAGA OF ACHIEVEMENT' (RAAF Story) (Hall), "Aust. Tech. Story' (STC) (MUS-

LETTERS CONTINUED

After much debate and consideration the motion was defeated by a considerable majority.

I think I made my position and reasons known but in spite of this my "fellow" amateurs could not see their way clear to refrain their indulgence for a couple of hours for the sake of a fellow club member.

I am a relative newcomer to amateur radio but if that is an example of the amateur "fraternity" then maybe amateur radio isn't worth fighting for after all!

Sorry, ladies and gentlemen
and good luck,

Dimitri Perno VK4BDP
110 Panorama Drive
Nambour 4560

Contests

I refer to Terry Robinson's article.

Yes you may be permitted to air your opinion, but don't you think that you're asking a bit much. Granted not all amateurs enjoy contests however some of us do. I notice you only mentioned 20 metres. Don't tell me that is the only band that you have access to. Let us not split hairs here, I fully realise that contests can be a bore and that some contesters' petty antics do the amateur service an injustice. May I suggest that instead of being selfish you QSY to other bands, eg WARC have no contests, or maybe listen for some intruders. I know that you will achieve nothing by being selfish. You would be better served by filing official complaints to the DOTC about those cranky amateurs who do us wrong.

Enjoy your DXing Terry,
73's Bill Horner, VK4MWZ,
26 Iron St,
Gympie, 4570

CIO), 'History of Radio in SA' (Ross), 'This is the ABC' 1932–1983 (Inglis), 'The Magic Spark' (Walker), 'The Fabulous Phograph' (Gelatt) VK4EF 97 Jubilee Tce Bardon 4065 Ph: (07)3661803 can someone help please

---

YAESU FRG–7 Receiver fitted with fine tuning. Will pay top price for unit in EC. John Lauten VK4VK, QTHR Ph: (075) 381759 After 6pm.

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ICOM IC–3200 DUAL BANDER 25 wattsVHF/UHF. Replaced with IC–900 $845/ono. ICOM R-71 communications receiver with remote control 100KHz to 30MHz $1290. Both in EC. Peter O'Keefe VK3YF Ph: (058) 216070 PO Box 654 Shepparton 3630

KENWOOD TS660 all mode Quad-bander. inc. 50-54 MHz. very clean unit. $650. ICOM 1271E all mode 1240-1300 MHz inc. mic, manual, DC cable mint condition. $1500. Roger (VK3XRS) Ph: (051) 568291.

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KENWOOD TS-1205 $1500 YAESU FRG 9600 $900 FIF232C Cat interface as new $120 EAT 300 watt antenna tuner $300 2x6V 46Ahr lead acid batteries $60 computer Vic20 $20 all prices negotiable ring Phil VK3PGP Ph: (03) 2323428

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CICADIA 300 Data phone modem $150.00, Radio Shack, DMP 100 Dot Matrix printer plus manual $200 ono. Arthur VK3CUA QTHR Ph: (054) 437425

HY GAIN 18AVT TRAP VERT 80/100M $100. Kenwood TS5205 with mic & H'book EC $525. YAESU FT757 GX MKII as new with h'book & service manual $1500. VK3~~0~~M Not QTHR. Ph: (059) 443019.

UPDATED ROBOT 800B dedicated computer keyboard unit for sending and receiving morse code at 3 to 99 wpm, RTTY at 850wand 170 cycle shifts, ASCII at 100 BWDS and SSTV. This unit fitted with factory supplied split screen modifications, all tech. manuals, literature and QST review write ups supplied. EC. at $350 ono. W. Babb (03) 337902 VK3AQB.

WANTED VICTORIA

BOOK "SERVICING BY SIGNAL TRACER" By John Ryder and any books etc. on related subjects. Also wanted valve type test equip. Ralph VK3CQK, QTHR. Ph: (058) 521372.

FM1675 4 CHANNEL Xtal Switching kit FV101 outboard VFO suit FT101 Maurie VK3AZB Ph: (03) 8908038 QTHR.

Transverter DSE 10/11m to 80M. Warren VK3BYD Ph: (059) 623973 After 6pm.

BACK ISSUES SILICON CHIP MAGAZINE to December 1988 Ken VK3ZFI QTHR. Ph: (03) 580 5357.

ICOM IC4AT to buy or swap for Kenwood TR2500 2M hand held. Contact Les VK3SL (03) 4282340 all hrs.

HANDBOOK FOR HEATHKIT HW100 Transceiver original or photocopy will travel or pay postage please help! Details and price to P. Cosway VK3DU QTHR Ph: (03) 4891385

KENWOOD TS-120V GC with microphone power lead $420. Rodney VK2CN QTHR. Ph: (049) 498393

TS530S WITH SSB/CW narrow filters, mic, handbook, GC $600 firm. Ph: (066) 527160 Peter VK2EVB.

FOR SALE - NSW

IBM PC/XT 640K memory, 30MB hard disk, Hercules plus graphics card, Taxan amber screen. Turbo board, 8087 math–coprocessor.

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Fill out the following form and send to:

The Membership Secretary
Wireless Institute of Australia
PO Box 300
Caulfield South, Vic 3162

I wish to obtain further information about the WIA.

Mr, Mrs, Miss, Ms: .....

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Some software included. Complete system in EC. Genuine IBM system at a clone price $2,600. VK2HL (02) 9814762.

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KENWOOD DFC230 digital frequency controller Frank VK2CWL (068) 890535.

SIGNAL GENERATOR to 500 MEG or more also any test equipment of any age by collector David Kidd Dubbo. Ph: (068) 818906.

CIRCUITS etc for simple repeater ident and timer control. To be used in UHF CB repeater (NEE01). Reasonable price paid for completed unit. VK2JH (068) 878241 QTHR.

MONOBAND 80m transceiver for mobile work. SSB or SSB/CW. Solid State prefer. Peter VK2EMU Ph: (02) 571426 (ans. machine).

YAESU FT-480R 2m multi. Philips SSB/AM 201 HFCB. Kenwood MB-100 bracket. DSE VZ-200 + RTTY. C-64 packet modem. Isopole Jnr 2m vert. Stationmaster 10/11 vert. Chirnside 80,15,10m whips. Ph: (062) 883589

FOR SALE ACT

ICOM 720A with microphone and CW filter. Unused.Nally tower. VZ200 Computer plus 300 Baud terminal and RTTY de-mod kit Ph: Richard (VK1UE) (062) 581228.

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HAMADS

Please Note: If you are advertising items For Sale and Wanted please use a separate form for each. Include all details; eg Name, Address, Telephone Number (and STD code), on both forms. Please print copy for your Hamad as clearly as possible.

*Eight lines free to all WIA members, ninth line for name and address Commercial rates apply for non—members. Please enclosed a mailing label from this magazine with your Hamad.

*Deceased Estates: The full Hamad will appear in AR, even if the ad is not fully radio equipment.

*Copy typed or in block letters to PO Box 300, Caulfield South, Vic 3162, by the deadline as indicated on page 1 of each issue.

*QTHR means address is correct as set out in the WIA current Call Book.

*A courtesy note will be forwarded to acknowledge that the ad has been received.

Ordinary Hamads submitted from members who are deemed to be in general electronics retail and wholesale distributive trades should be certified as referring only to private articles not being re—sold for merchandising purposes.

Conditions for commercial advertising are as follows: $22.50 for four lines, plus $2.00 per line (or part thereof) Minimum charge — $22.50 pre—payable.

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KENWOOD

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ALL-MODE TRIBAND TRANSCEIVER

Work all the upper bands and gain access to the latest communications techniques with the all-new Kenwood TS-790A. This transceiver gives you access to the exotic world of VHF and UHF communications, including Satellite, Moonbounce, Grid-square DX and VUCC. All with legendary Kenwood ease and reliability.

Features include: All-mode Triband coverage: 144-148MHz, 430-450MHz, 1240-1300MHz, USB, LSB, CW, CW(N) and FM • 45 watts output (VHF) • Very high performance GaAs FET RF amplifier for high sensitivity and wide dynamic range • Dual watch function across bands • Band selection/ exchange function • Satellite communication frequency correction for uplink/downlink operation • Auto-mode and auto repeater offset • 59 multi-function memories • Call channel function • Repeater Reverse • Memory scroll and shift • Multi-scan functions and much more!!

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This compact mobile transceiver delivers 50 watts of power with the controls at your fingertips.

Features include: • Multi-function microphone with Call, VFO, Memory Recall, and a Programmable key • Large amber display plus illuminated keys • 50/10/5 watts switchable power output • Sensitivity 12dB SINAD/less than 0.16uV • 20 multi-function memories • Programmable call channel • Selectable CTCSS encoder buillt in • Tone Alert system • Multi-mode scanning (band, programmable band, memory plus programmable band) • Options include remote control and digital recording.

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WITH ALL THE FEATURES IN ICOM'S NEW MOBILE TRANSCEIVERS, IT'S A WONDER THEY'RE STILL MOBILE.

Icom have packed so many functions into the IC228A and IC3210A mobile transceivers, you'd think there was no way you could still make them so compact. (It might explain why nobody else has made a transceiver with so many features.)

Some of the features both transceivers share is the multi-colour LCD display for easy viewing. Orange, red and green highlight the numbers and letters displayed in black.

There are various power outputs across the range, from 25W to 45W.

For novices, the 228A can be reduced to 10W.

The Programmed Scan function scans all frequencies between two programmable scan edge frequencies, while the Memory Scan function scans all memory channels in succession, except, of course, those you lock out.

Thanks to the pocket beep, you'll never miss a call. By installing a UT-40 Tone Squelch Unit (this is sold separately) the transceiver functions as a pager. When the frequency of a received tone equals the tone frequency you set, a thirty second alarm is emitted over the speaker.

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Every five seconds, Priority Watch monitors the Call Channel, one or all memory channels in succession. And that's while you operate! No longer do you have to flip back and forth between frequencies.

While the IC228A has 20 memory channels, the more advanced IC3210A has 40. Each channel stores all the information required to work a repeater.

With the IC3210A, there are 20 double-spaced memory channels for 2 metres and 70 cm.

What's more, the IC3210A offers full duplex facility. Which means you can now simultaneously transmit on one band and receive on the other. You never have to wait for a long "over". You have full "break in". In fact, you can talk as easily as talking over the phone.

Call (008) 338 915 for your nearest Icom stockist today. (The telephone conversation in itself is a very good example of IC3210A's duplex facility.)

With all these functions in one small compact mobile, it really is a wonder they're still so compact and mobile.

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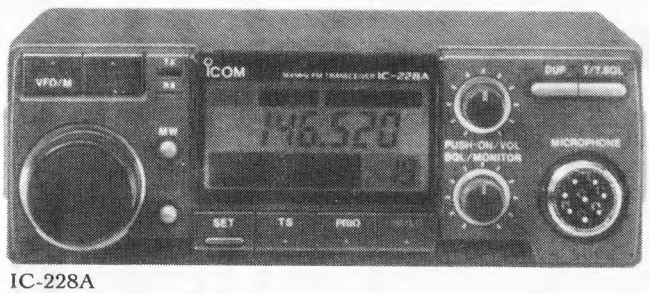

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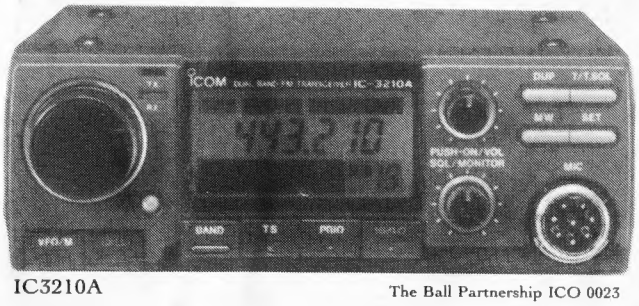

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